



**CUY-90-14.90**

**PID 77332/85531**

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**APPENDIX EX-34**

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**CUY-090-1725 PID 0.516**

**(Reference Document)**

State of Ohio  
Department of Transportation  
Jolene M. Molitoris, Director

**Innerbelt Bridge  
Construction Contract Group 1 (CCG1)**

L1-0 Q-17

STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
**CUY-42-19.28**  
**CUY-322-(1.08-1.39)**  
 CUYAHOGA COUNTY  
 CITY of CLEVELAND

U-234(2)

AC I-1057(8)  
**LIMITED ACCESS**

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	AC I-1057(8) U-234(2)	

1  
124

This improvement is especially designed for through traffic and has been declared a Limited Access highway or freeway by action of the Director of Highways in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

CUYAHOGA COUNTY  
 CUY-42-19.28  
 CUY-322-(1.08-1.39)

FEDERAL PROJECT NO I-1057(8) APPEARING ELSEWHERE IN PLANS SHALL BE CONSIDERED TO READ AC I-1057(8)

The standard specifications of The State of Ohio Department of Highways, including changes and supplemental specifications listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of U.S.R. 42, but will require the closing to Westbound traffic of U.S.R. 322 during which time detours will be provided as shown hereon. Provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

The right of way for this improvement will be provided by The State of Ohio.

Approved *Arthur A. Brown*  
 Date 10-9-57 Division Deputy Director

Approved *L. H. Mahoney*  
 Date 11-8-57 Deputy Director of Planning and Programming

Approved *M. Gorman*  
 Date 11-5-57 Engineer of Bridges

Approved *P. E. Shultz*  
 Date 11-6-57 Engineer of Location and Design

Approved *P. C. Masteter*  
 Date 11-6-57 Deputy Director of Design and Construction

Approved *Wm. J. Johnson*  
 Date 11-11-57 First Assistant Director

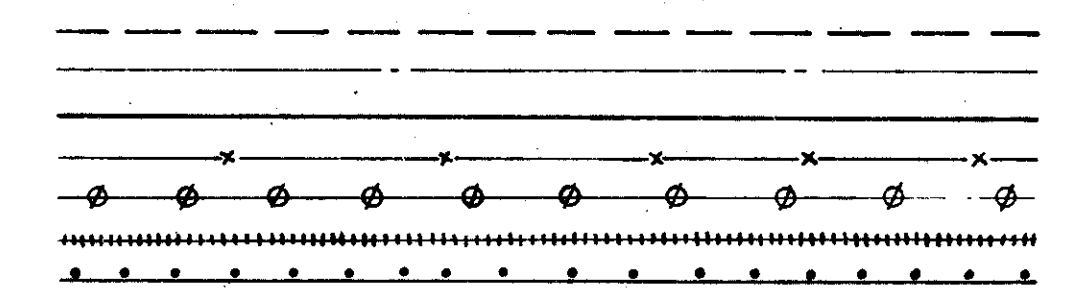
Approved \_\_\_\_\_  
 Date \_\_\_\_\_ Acting Director of Highways

Approved *Louis L. Prasher*  
 Date 11-18-57 Director of Public Service, City of Cleveland

SECTION NO CUY-42 R-18.81 APPEARING THROUGHOUT THESE PLANS SHALL BE CONSIDERED TO READ CUY-42-19.28.  
 PART I REFERS TO THESE PLANS.  
 PART II IS NOT A PART OF THIS CONTRACT.

CONVENTIONAL SIGNS

SECTION LINE  
 CENTER LINE  
 PROPERTY LINE  
 FENCE LINE  
 POLE LINE  
 RAILROAD  
 GUARD RAIL



INDEX OF SHEETS

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	93B

Sheets 1, 119 and 123 revised 6-13-58  
 sheets 121, 103 and 100 revised 10/2/58  
 sheet 103A added 10/2/58

LINE DATA

LENGTHS OF PROJECTS:

PROJECT ACI-1057 (8):  
 Begin Project Sta. 25+00 } = 2600.00 Lin. Ft.  
 End Project Sta. 51+00 }  
 Add for Equation (Sta. 27+09.87 Back = Sta. 26+61.13 Ahead) = 48.74 " "  
 NET LENGTH OF PROJECT ACI-1057 (8) = 2648.74 LIN. FT.  
 OR 0.501 MILE

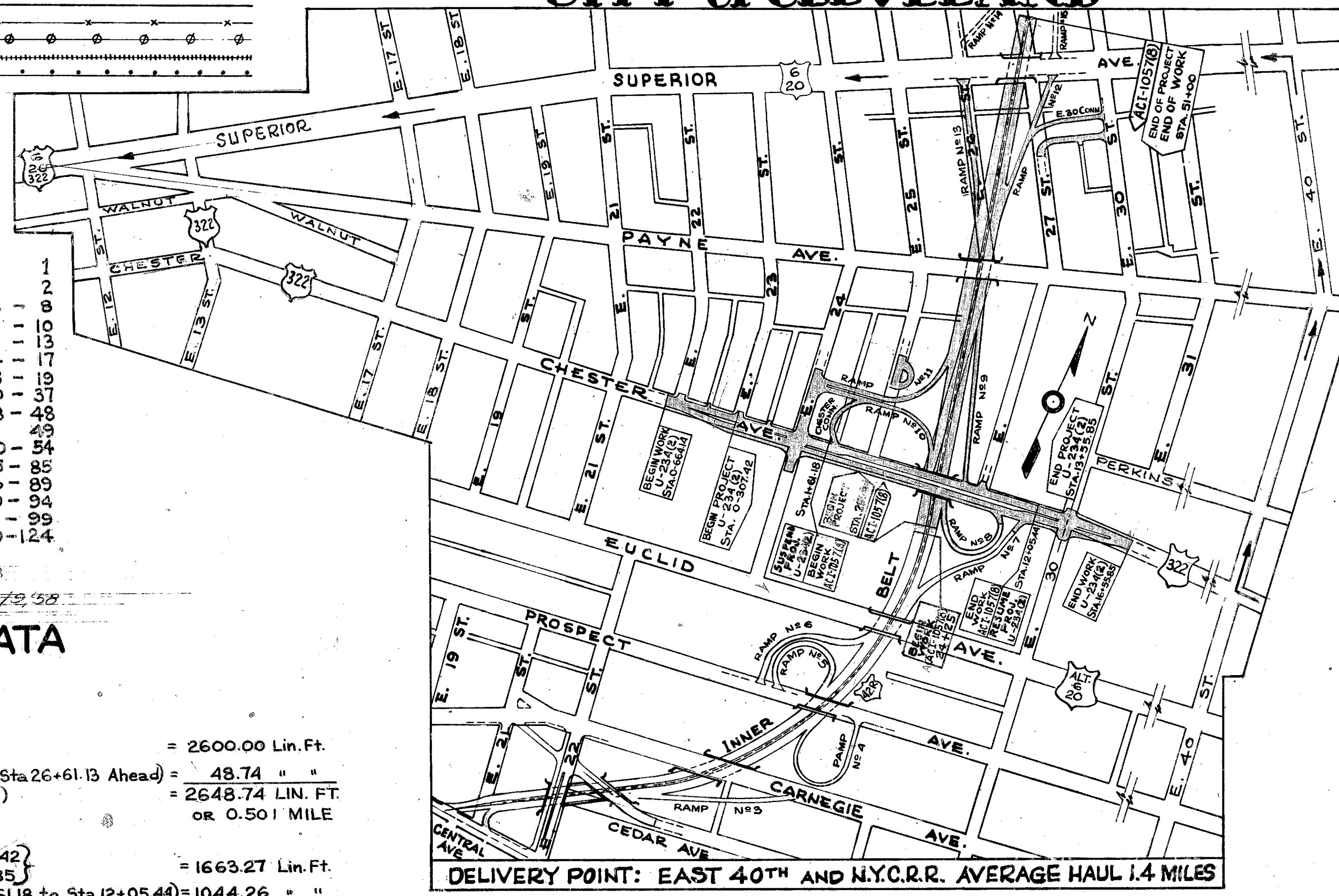
PROJECT U-234 (2):  
 Begin Project Sta. 0+307.42 } = 1663.27 Lin. Ft.  
 End Project Sta. 13+55.85 }  
 Deduct for Interstate Work (Sta. 1+61.18 to Sta. 12+05.44) = 1044.26 " "  
 NET LENGTH OF PROJECT U-234(2) = 619.01 LIN. FT.  
 OR 0.117 MILE

LENGTHS OF WORK:

PROJECT ACI-1057 (8):  
 Net Length of Project = 2648.74 Lin. Ft.  
 Add for Work Sta. 25+00 to Sta. 27+00 } 75.00 Lin. Ft.  
 Begin Work Chester Ave. Sta. 1+61.18 } = 1044.26 " "  
 End Work Chester Ave. Sta. 12+05.44 }  
 NET LENGTH OF WORK ACI-1057 (8) = 3768.00 LIN. FT.  
 OR 0.713 MILE

PROJECT U-234 (2):  
 Net Length of Project = 619.01 Lin. Ft.  
 Begin Work Sta. 0-664.14 } = 356.72 " "  
 Begin Project Sta. 0-307.42 }  
 End Project Sta. 13+55.85 }  
 End Work Sta. 16+55.85 }  
 NET LENGTH OF WORK U-234(2) = 1275.73 LIN. FT.  
 OR 0.241 MILE

Total Length of Work = 5043.73 Lin. Ft. or 0.955 Mile.



LOCATION PLAN

SCALE IN FEET  
 1" = 400'  
 DETOUR  
 PORTION TO BE IMPROVED  
 STATE HIGHWAYS  
 OTHER HIGHWAYS

SCALES

PLAN 1" = 50'  
 PROFILE HOR. 1" = 50'  
 PROFILE VER. 1" = 10'

STANDARD DRAWINGS

DR-1	1-3-55		
RI-1	1-3-55		
G-707	6-1-56	I-1,2,3,4,5	2-20-45
T-35	1-2-56	F-8,C,B,2,7,8	B 8-1-56
B-T-50-70-71	ENP 10-1-47	I-8,M,H,NP1	5-1-52
B-T-71 R	3-2-53	I-8,M,H,NP1A	1-3-55
T.J.	5-1-56	I-8 NP2	5-1-52
L.J.NP1	7-1-55		7-1-54

STANDARD DRAWINGS

I-14G	1-22-52	AS-1-54	12-1-54
I-15 NP1	8-1-55	RB-1-55	3-1-55
		I-21-23	S-1-56
I-15 NP2A	6-1-57	C-5B-2-56	12-3-56
I-15 NP2B	6-1-57		
L-1	4-1-50		
L-3	4-1-50		
L-3A	4-1-50		

SUPPLEMENTAL SPECIFICATIONS

5	6-8-55		
E-101	1-1-57		
S-114	REV. 8-1-57		

DEPARTMENT OF COMMERCE  
 BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION	ENGINEER	DATE

FILE NO. CUY-42-19.28 & CUY-322-(1.08-1.39)  
 CUYAHOGA COUNTY CITY OF CLEVELAND  
 DATE OF LETTING 195  
 CONTRACT NO.

# LOCATION PLAN

SCALE: 1" = 200'

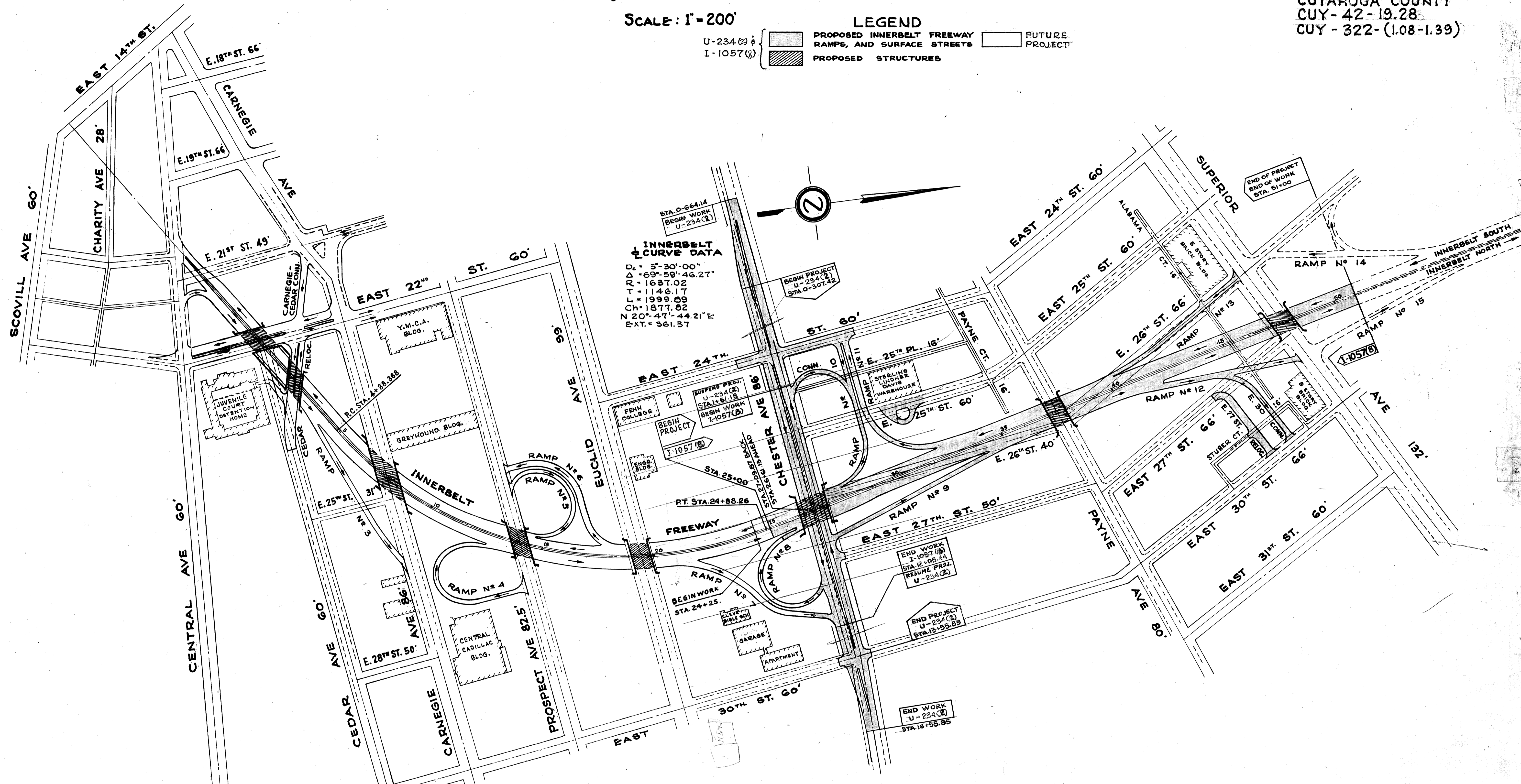
## LEGEND

- U-234 (2) } PROPOSED INNERBELT FREEWAY
- I-1057 (2) } RAMP, AND SURFACE STREETS
- PROPOSED STRUCTURES
- FUTURE PROJECT

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	I-1057 (2) U-234 (2)	

2  
124

CUYAHOGA COUNTY  
CUY-42-19.28  
CUY-322-(1.08-1.39)



### TEMPORARY RUNAROUND ROADWAYS

LOCATION	SIDE	WIDTH
EAST 22 <sup>ND</sup> ST.	WEST	4 LANES @ 10' = 40'
CARNEGIE AVE.	SOUTH	6 LANES @ 9'-4" = 56'
PROSPECT AVE.	NORTH	3 LANES @ 12' = 36'
EUCLID AVE.	NORTH	5 LANES @ 10' = 50'
CHESTER AVE.	NORTH	6 LANES @ 9'-4" = 56'
PAYNE AVE.	NORTH	3 LANES @ 12' = 36'
SUPERIOR AVE.	SOUTH	5 LANES @ 10' = 50'

NOT PART OF THIS PROJECT

# CODE 7221 TYPICAL SECTION

## TYPE T-71 REINFORCED CONCRETE PAVEMENT

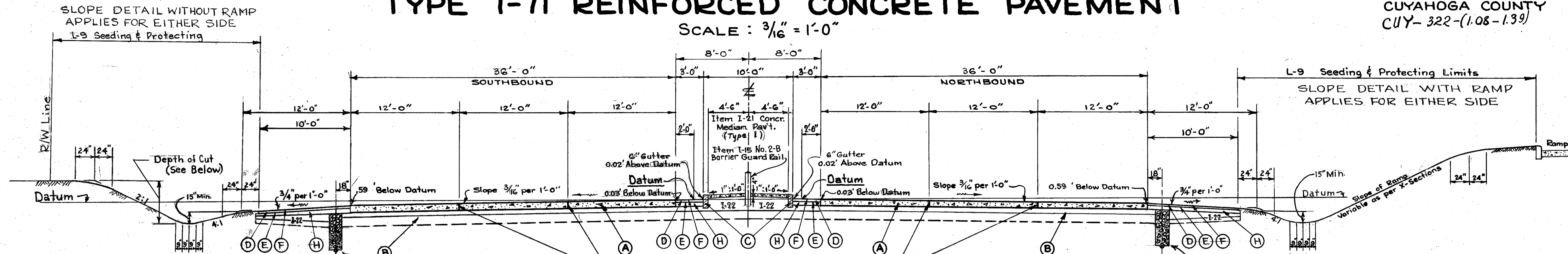
DESIGN SPEED  
50 M.P.H.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

3  
124

CUY - 42 R - 18.81  
CUYAHOGA COUNTY  
CUY - 322 - (1.08 - 1.39)

SCALE: 3/16" = 1'-0"



- Standard Longitudinal Joints
- (A) Item T-71 9" Reinforced Portland Cement Concrete Pavement
  - (B) Item I-22 Subbase, (6" to Sta. 34+00 - 18" Sta. 34+00 Forward)
  - (C) Item I-11 6" x 18" Sandstone Curb, 1" Bullnose
  - (D) Item B-33 3" Bituminous Macadam Base Course
  - (E) Item T-30 Bituminous Prime Coat @ .35 gal./sq. yd. (Sec. M-5.7, RT-2 or RT-3 or Sec. M.5.3, MC-0 or MC-1)
  - (F) Item T-31 Bituminous Surface Treatment, as per Plan (See note in proposal).
  - (H) Item I-18 Stabilized Crushed Aggregate, as per Details No 1, No 2 & No 4 on this Sht.

### NORMAL SECTION - INNERBELT

SOUTHBOUND NORTHBOUND

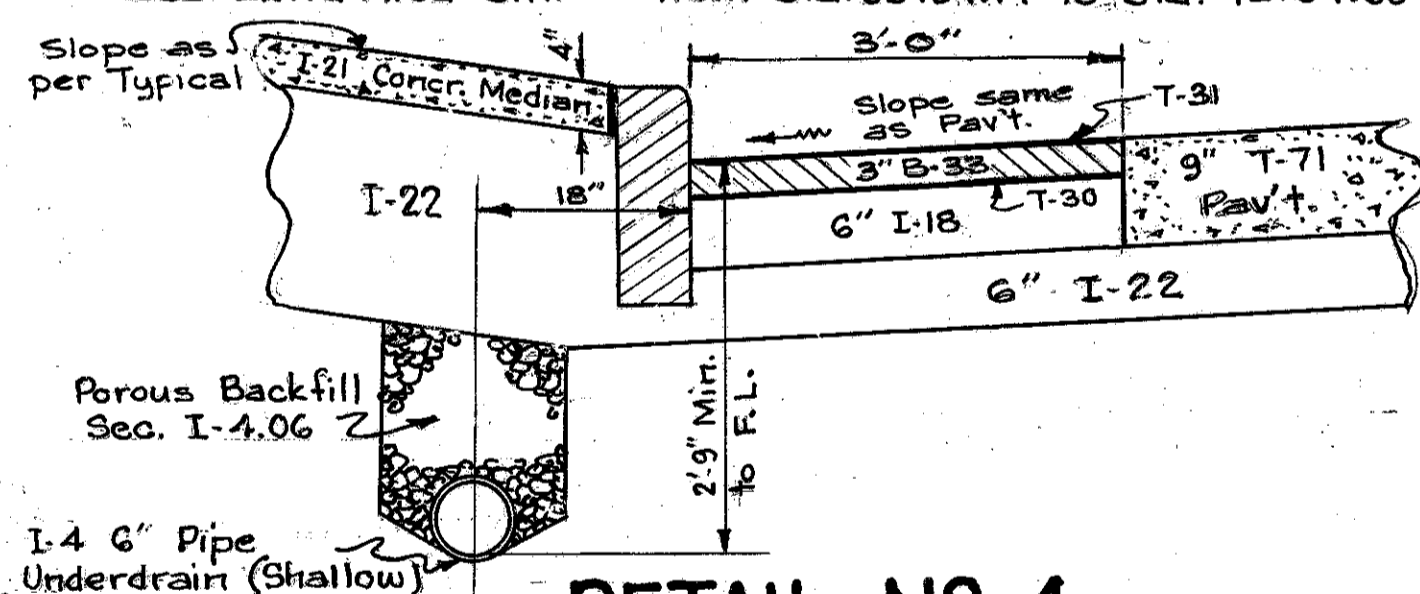
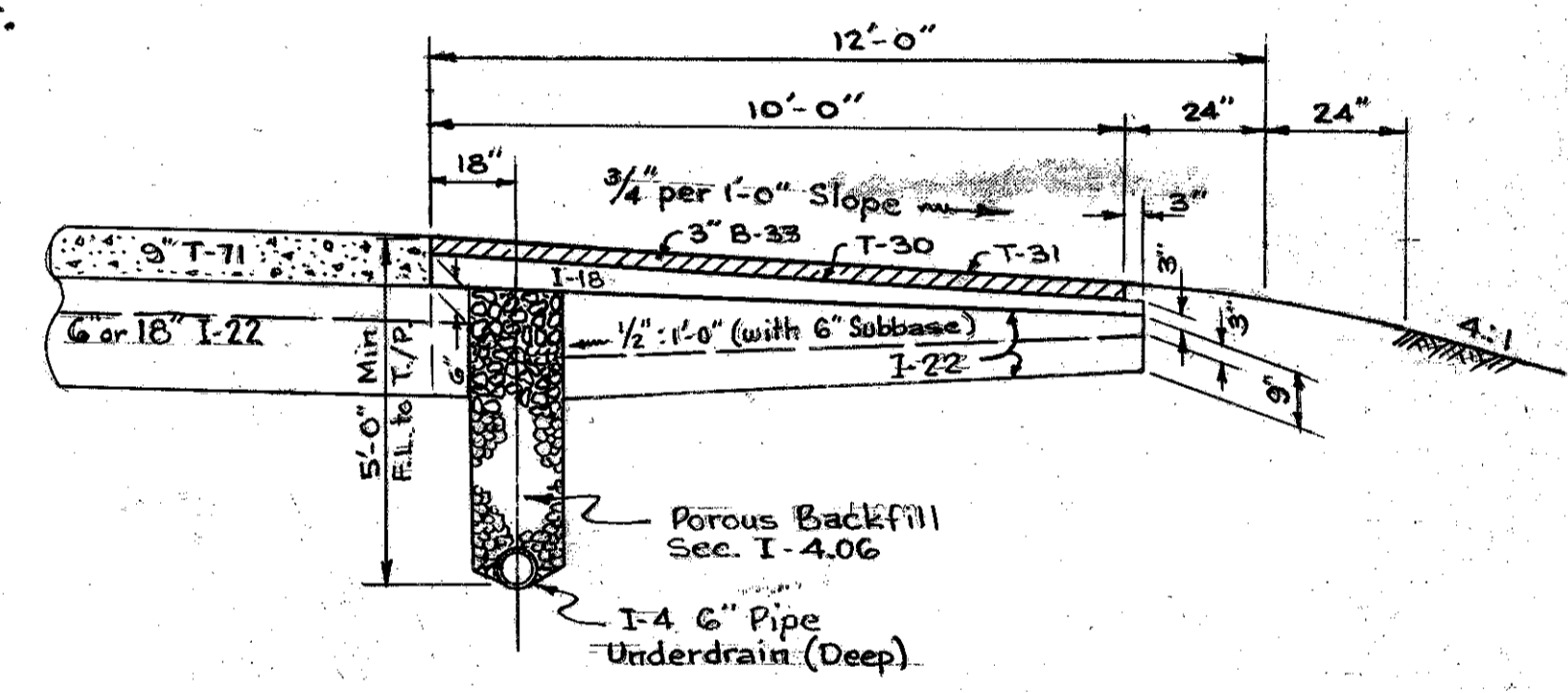
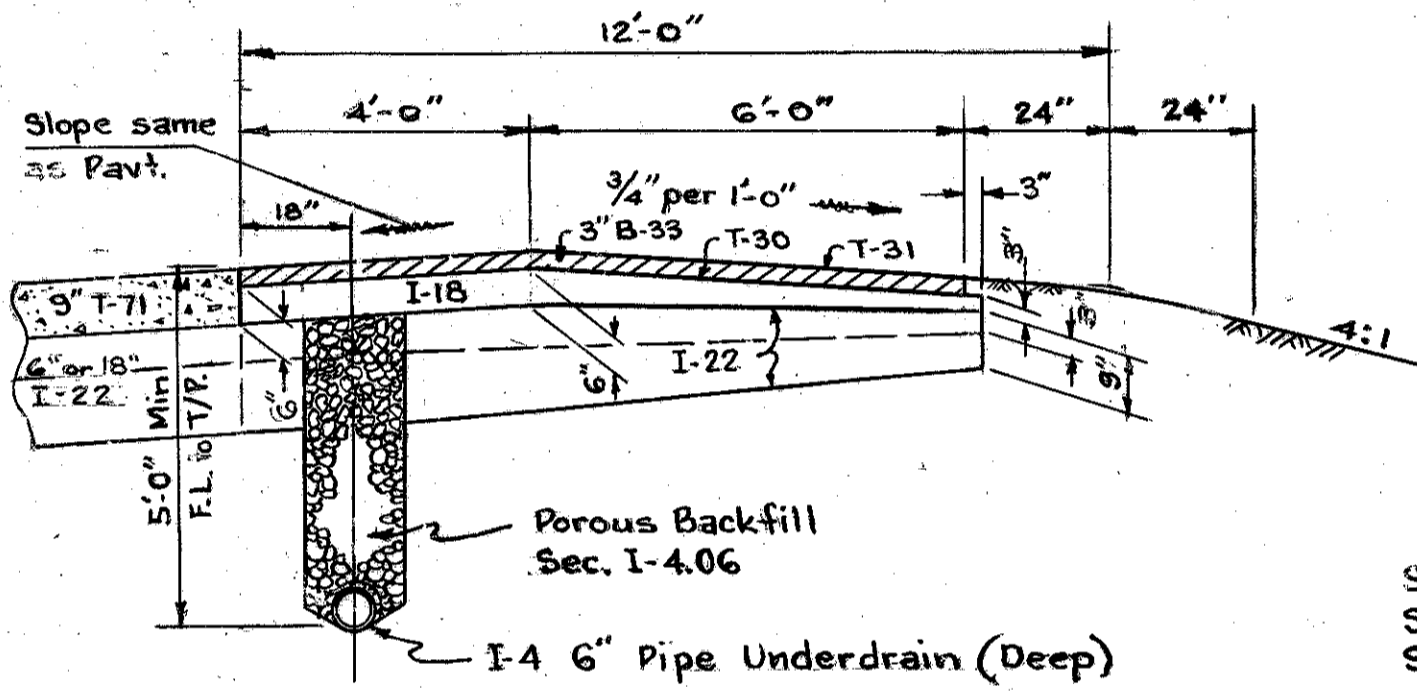
STA. 27+30 TO STA. 34+50  
STA. 39+00 TO STA. 40+14.16

See Extra Area Sht. from Sta. 27+30 to Sta. 28+80  
See Extra Area Sht. from Sta. 31+80 to Sta. 34+50  
See Extra Area Sht. from Sta. 39+00 to Sta. 40+14.16

STA. 27+75 TO STA. 36+00  
STA. 39+94.14 TO STA. 42+04.60

See Extra Area Sht. from Sta. 27+75 to Sta. 29+00  
See Extra Area Sht. from Sta. 31+75 to Sta. 36+00  
See Extra Area Sht. from Sta. 39+94.14 to Sta. 42+04.60

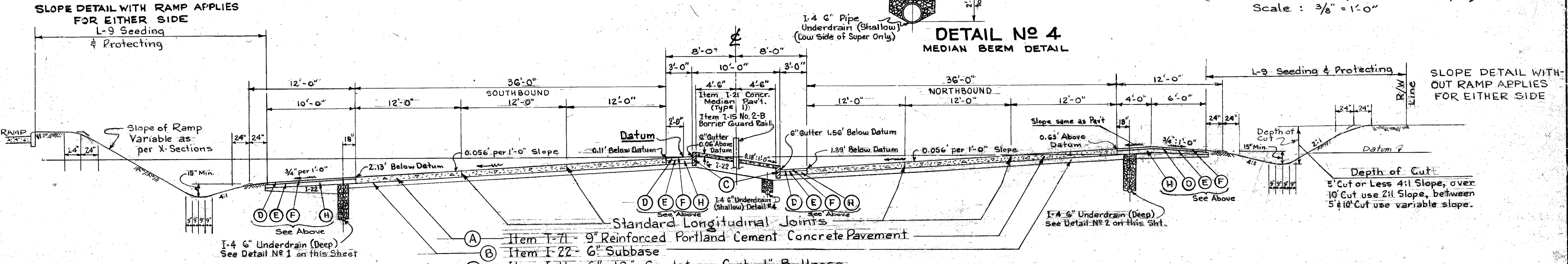
NOTE:  
Cross Sections shall govern over Typical Sections where variable conditions are encountered in slopes.



**DETAIL NO 2**  
PAVED SHOULDER DETAIL  
(For High Side of Super)  
Scale: 3/8" = 1'-0"

**DETAIL NO 1**  
PAVED SHOULDER DETAIL  
(For Normal Section & Low Side of Super)  
Scale: 3/8" = 1'-0"

**DETAIL NO 4**  
MEDIAN BERM DETAIL



- (A) Item T-71 9" Reinforced Portland Cement Concrete Pavement
- (B) Item I-22 6" Subbase
- (C) Item I-11 6" x 18" Sandstone Curb, 1" Bullnose

### SUPERELEVATED SECTION

NORTHBOUND TRANSITION  
STA. 25+00 TO STA. 27+75

(SOUTHBOUND PAVEMENT OF THIS TYPICAL SECTION DOES NOT APPLY TO PART-I)

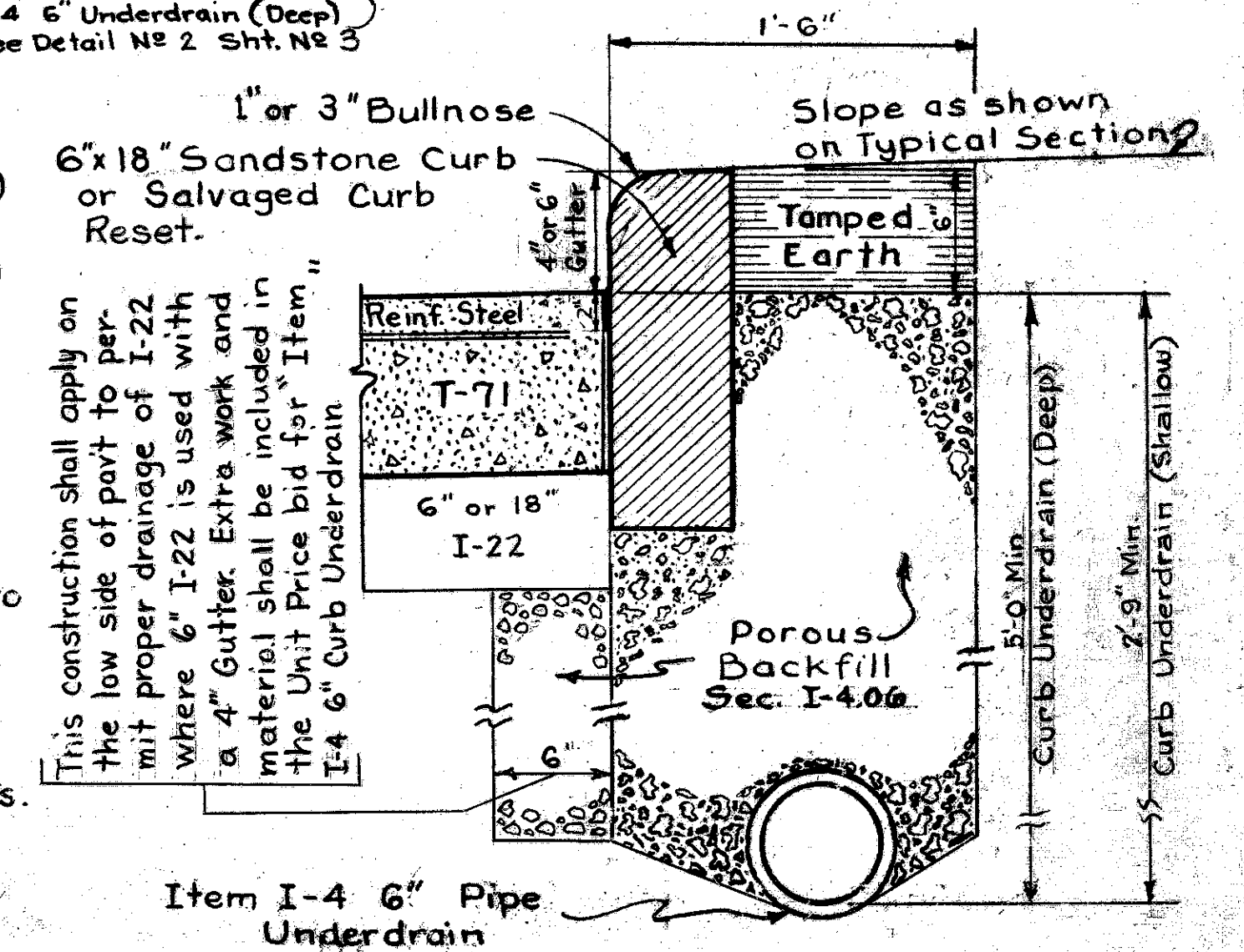
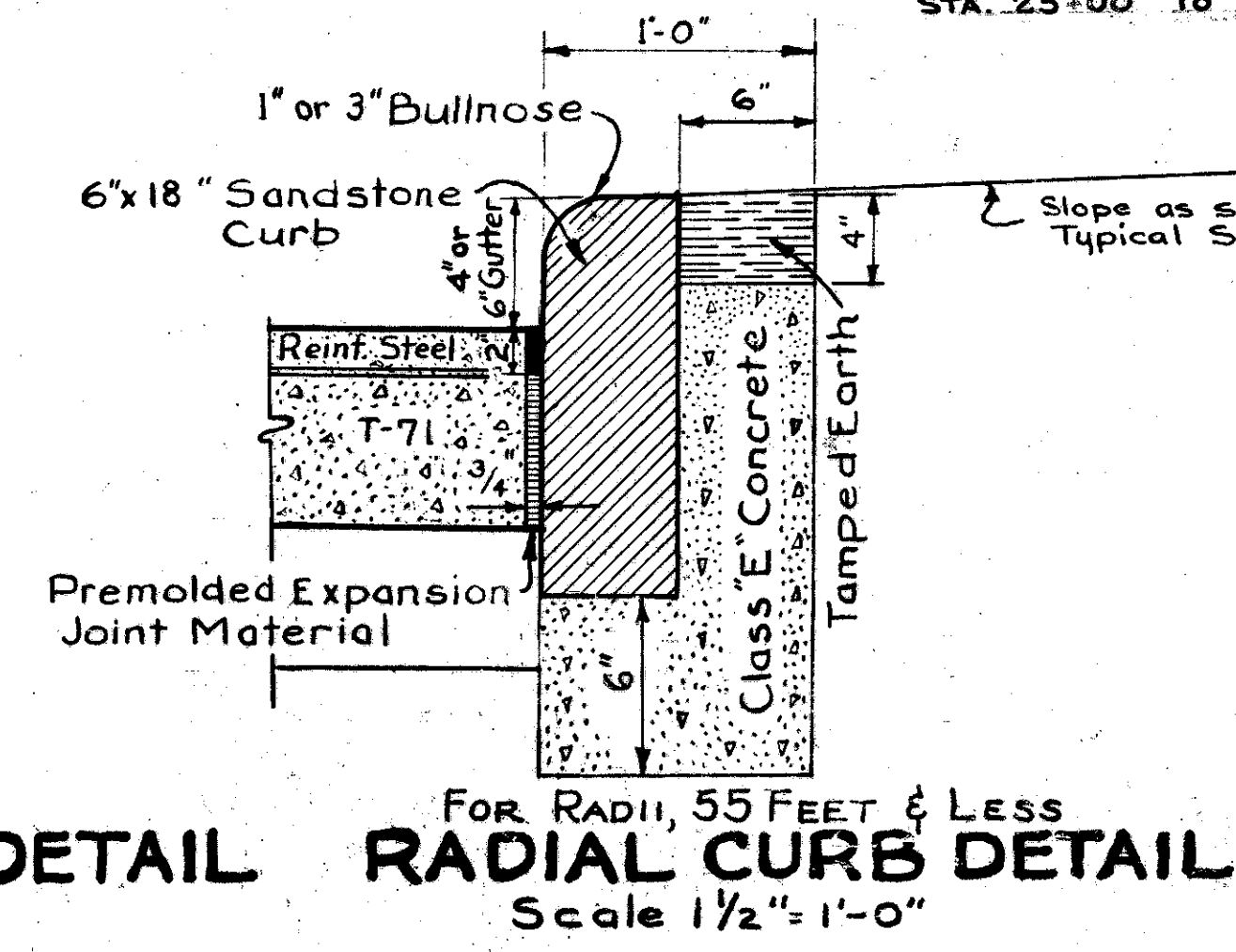
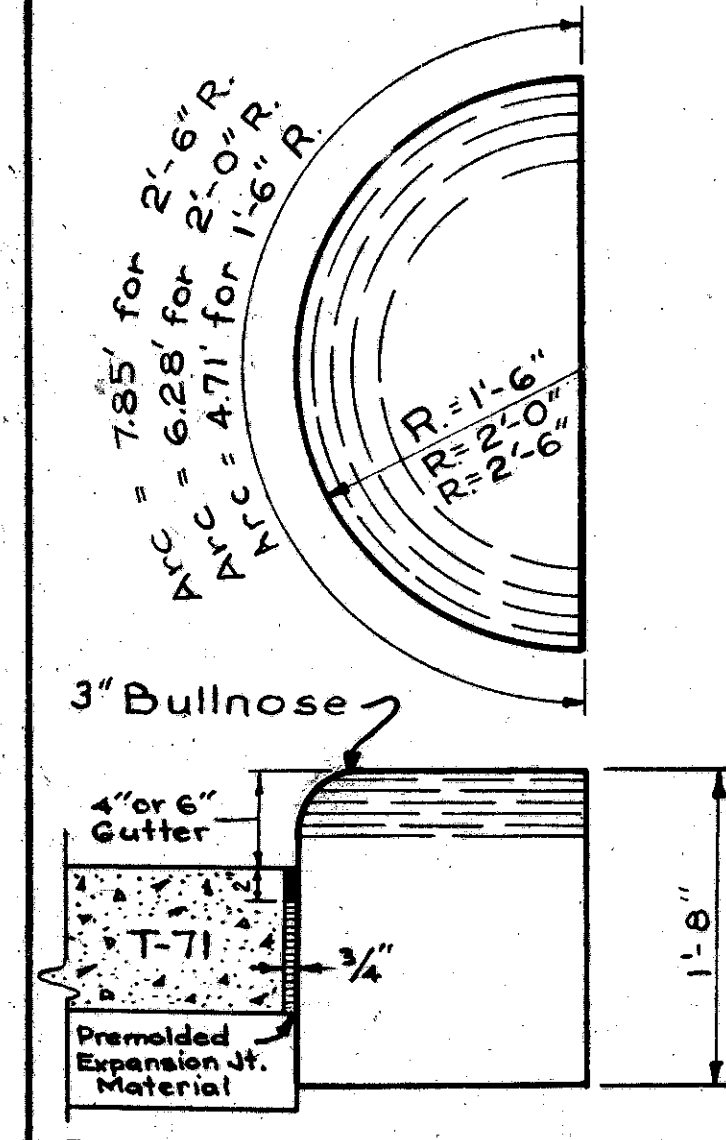
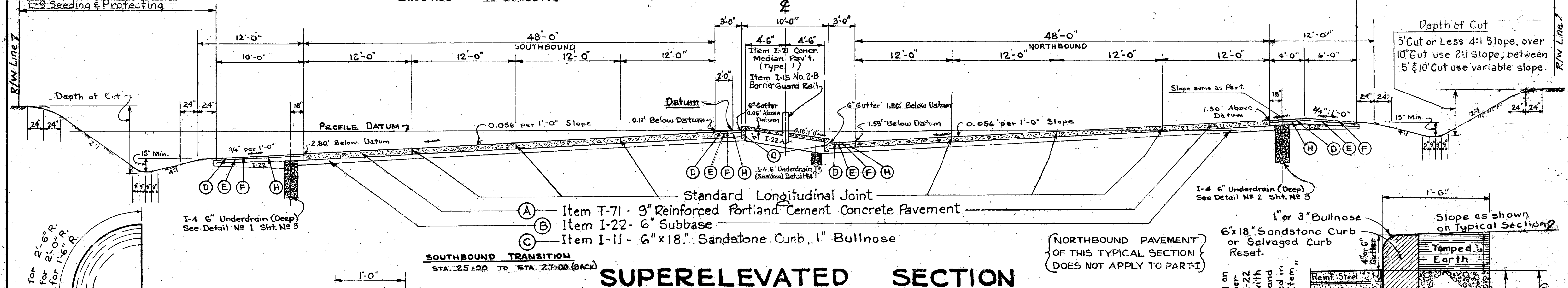
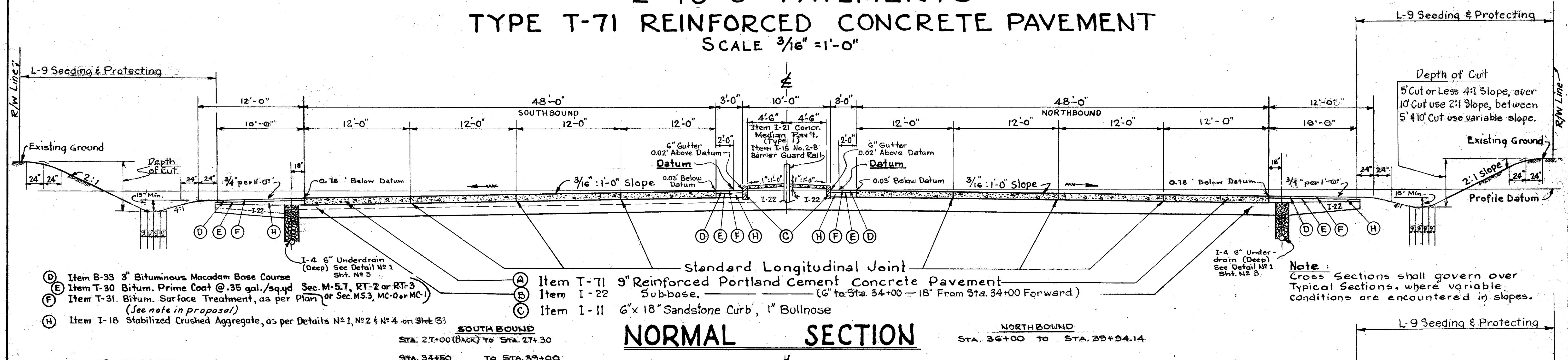
TYPICAL SECTION - INNERBELT NORTHBOUND & INNERBELT SOUTHBOUND

**CODE 7221**  
**TYPICAL SECTIONS**  
**2-48'-0" PAVEMENTS**  
**TYPE T-71 REINFORCED CONCRETE PAVEMENT**  
**SCALE 3/16" = 1'-0"**

**DESIGN SPEED**  
**50 M.P.H.**

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

CUY-42R. - 18.81  
 CUYAHOGA COUNTY  
 CUY-322-(1.08-1.39)



**NOTE:**  
 The three quarter (3/4) inch Premolded Joint Material shall meet the requirements of Section M-10.02 of the Standard Specifications. It shall be placed in front of the Radial Curb and Bumper Blocks to within two (2) inches of the surface. The remaining space shall be filled with Bituminous filler meeting the requirements of Sec. M-5.6 F 2 of the Standard Specifications. The cost of the joint & the cost of class "E" concrete to be included in price bid per lineal foot of curb.

**NOTE:**  
 If pavement is built before the curb is placed, it shall be built full width and any opening between curb and pavement shall be filled with dry sand to within two (2) inches of the surface; the remaining space shall be filled with Bituminous filler meeting the requirements of Sec. M-5.6 F 2 of the Standard Specifications. Sand to meet the requirements of Sec. M-2.1. The cost of joint to be included in the price bid per lineal foot of curb.

CUY-42R - 18.81  
 CUYAHOGA COUNTY  
 CUY-322-(1.08-1.39)

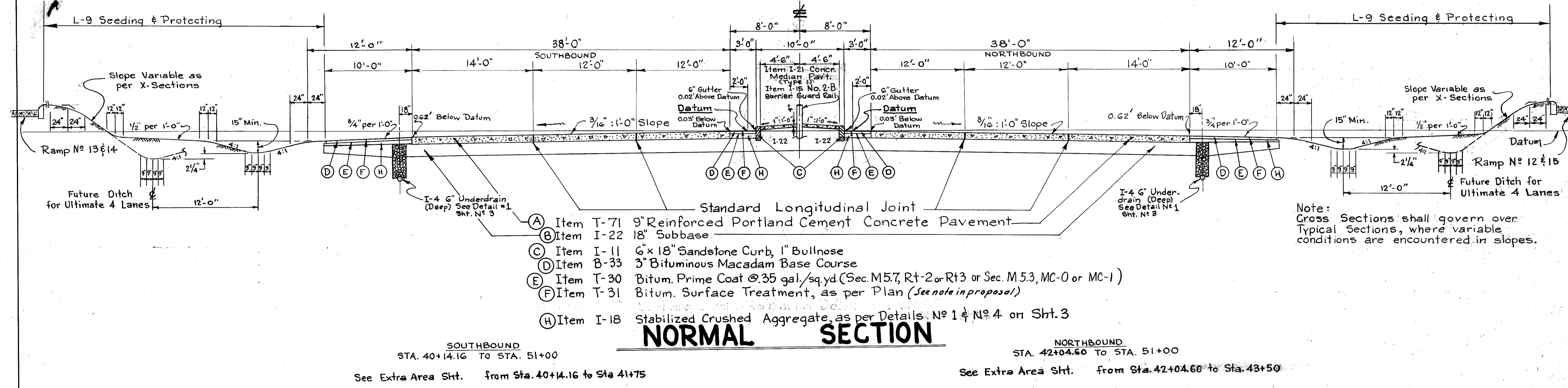
# CODE 7221

## TYPICAL SECTIONS

### 2 - 38'-0" PAVEMENTS

### TYPE T-71 REINFORCED CONCRETE PAVEMENT

SCALE 3/16" = 1'-0"



- (A) Item T-71 9" Reinforced Portland Cement Concrete Pavement
- (B) Item I-22 18" Subbase
- (C) Item I-11 6" x 18" Sandstone Curb, 1" Bullnose
- (D) Item B-33 3" Bituminous Macadam Base Course
- (E) Item T-30 Bitum. Prime Coat @ .35 gal./sq.yd. (Sec. M5.7, Rt-2 or Rt3 or Sec. M5.3, MC-0 or MC-1)
- (F) Item T-31 Bitum. Surface Treatment, as per Plan (See note in proposal)
- (H) Item I-18 Stabilized Crushed Aggregate, as per Details No 1 & No 4 on Sht. 3

## NORMAL SECTION

SOUTHBOUND  
 STA. 40+14.16 TO STA. 51+00  
 See Extra Area Sht. from Sta. 40+14.16 to Sta. 41+75

NORTHBOUND  
 STA. 42+04.60 TO STA. 51+00  
 See Extra Area Sht. from Sta. 42+04.60 to Sta. 43+50

Note: Cross Sections shall govern over Typical Sections, where variable conditions are encountered in slopes.

# TYPICAL SECTIONS CODE 7221

## 16', 18', & 24' PAVEMENTS

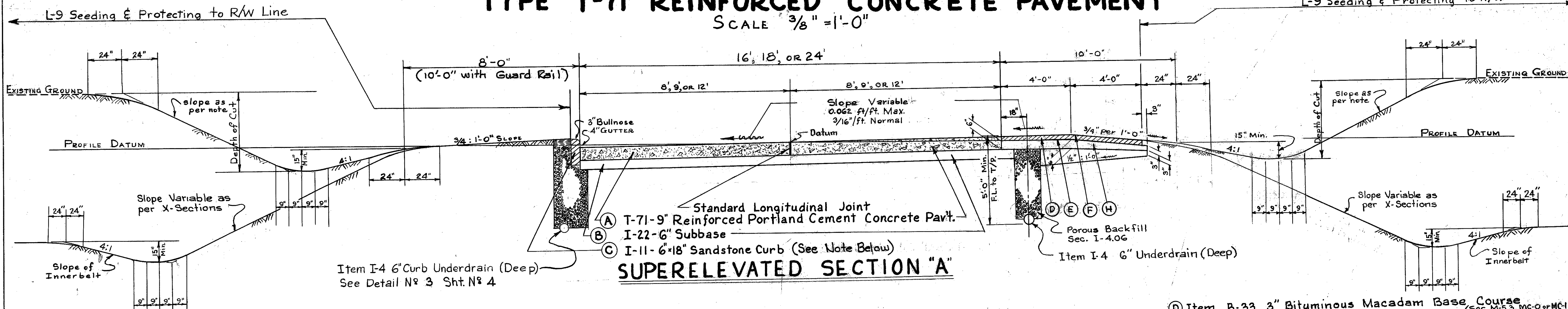
### TYPE T-71 REINFORCED CONCRETE PAVEMENT

SCALE  $\frac{3}{8}'' = 1'-0''$

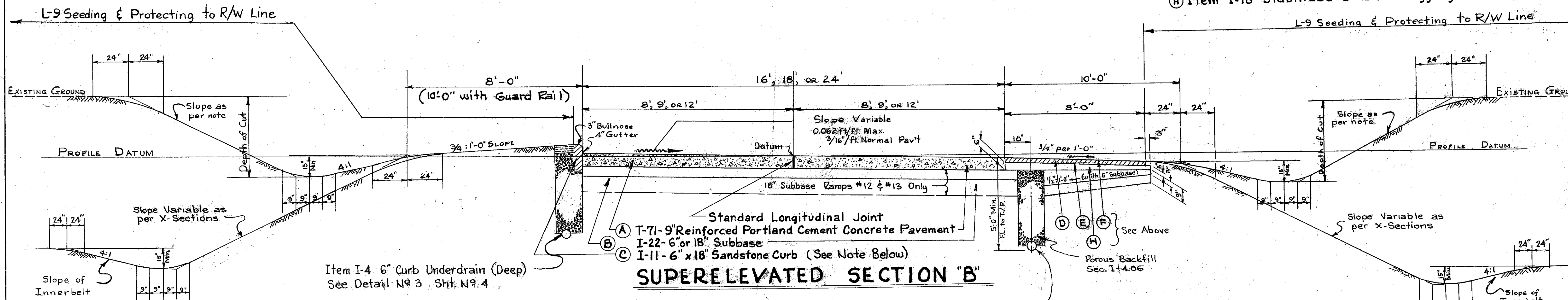
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		6

CUYAHOGA COUNTY  
CUY-42R-18.81  
CUY-322-(1.08-139)

L-9 Seeding & Protecting to R/W Line



- (D) Item B-33 3" Bituminous Macadam Base Course
- (E) Item T-30 Bitumin. Prime Coat @ .35 gal./sq.yd. (Sec. M-5.3, MC-0 or MC-1 or Sec. M-5.7, RT-2 or RT-3)
- (F) Item T-31 Bituminous Surface Treatment, as per Plan (See note in proposal)
- (H) Item I-18 Stabilized Crushed Aggregate



**NOTE:**

5' Cut or Less 4:1 Slope  
Over 10' Cut use 2:1 Slope  
Between 5' & 10' Cut, use Variable Slope

Cross Sections shall govern over Typical Sections, where variable conditions are encountered in slopes.

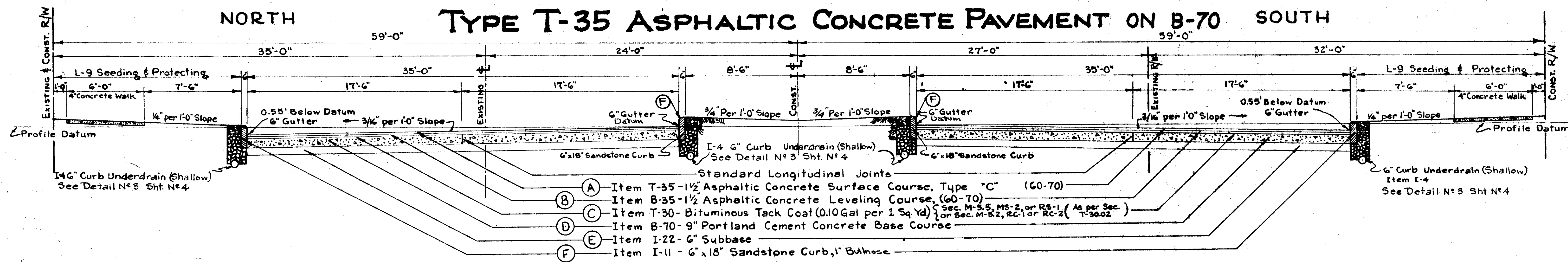
Mountable Curb to be on left side of Ramp in direction of travel

CODE 6707  
**TYPICAL SECTIONS**  
 2-35'-0" PAVEMENTS

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

7  
124

CUY. - 42 - 19.28  
 CUY - 322 - (1.08 - 1.39)  
 CUYAHOGA COUNTY



**CHESTER AVE**

SCALE: 1/4" = 1'-0"

Sta. 3+25.42 To Sta. 6+26.21  
 Sta. 7+65.73 To Sta. 10+30.43





# GENERAL NOTES

FED. DIVISION	STATE	PROJECT
2	OHIO	

9  
124

CUYAHOGA COUNTY  
CUY-42-19.28  
CUY-322-(1.08-1.39)

## DESIGN SPEED

The design speed for the Innerbelt Freeway Section CUY-42-19.28 is 50 miles per hour.

## UTILITY ADJUSTMENT

Any and all work required for Public or Private Utilities will be done by and at the expense of their respective owners, unless otherwise noted in the plans.

## CO-OPERATION WITH OTHER CONTRACTORS

Adjustments, relocations, and revisions of existing utilities and construction of new utilities will have to proceed concurrently with this construction. Therefore, it is the Contractor's obligation to cooperate with the other contractors, or agencies carrying on their respective operations during the construction of this Project, so as not to interfere with their normal procedure.

## BERMS AND SLOPES

Berms and slopes shall be finished in accordance with the Typical Sections, except where otherwise shown in the Cross-Sections. While the Cross-Sections as drawn show straight lines and angles, in construction all corners shall be rounded as shown on the Typical Sections.

## SUBGRADE COMPACTION

The subgrade under drives paved with T-70 material shall be compacted for a depth of six (6) inches to the density requirements shown in Table III Sec. E-101.09. Payment for subgrade compaction, as specified above, shall be included in the unit price bid for Item E-101 Roadway Excavation.

## EARTHWORK

A calculated Excavation Quantity has been added to the Earthwork Table in the Summary of Quantities to compensate for median and berm revisions in Typical Sections as now shown.

During the excavation and embankment construction operations, the Roadway Section shall be maintained at all times in such shape that no concentration of water will take place and be discharged in a concentrated flow over the slopes.

## STRUCTURAL EXCAVATION

The number of cubic yards of Structural Excavation to be paid for shall be the volume of prisms bounded on the bottom by the bottom plane of the footing, on the top by the surface of the ground after the removal of all the Roadway Excavation has been completed as shown on the Roadway Cross-Sections, and on the sides by vertical planes one foot outside the outer edges of the footing.

## TREE REMOVAL

The removal of all trees and stumps shall be included for payment in the Unit Price Bid per cubic yard for Item E-101 Roadway Excavation.

## TEMPORARY ROADWAY

The cost of removal and disposal of all existing pavements, curbs, public walks, and any other incidentals necessary in constructing the Temporary Run-Around Roadways shall be included in the Lump Sum Price Bid for Item S-15 Temporary Run-Around Roads.

Guard Rail needed for Temporary Roadways as shown on sheets 31, 34, and 36 of these Plans shall be the Steel Beam Type (Deep) No. 2-A, and shall be kept visible at night by installing caution lights (of a minimum sixty (60) wattage amber light bulbs) on every third (3rd) guard rail post. Cost of installation of Guard Rail and Caution Lights shall be included in the Lump Sum Price Bid for Item S-15 Temporary Run-Around Roads.

If the steel beam type (deep) No. 2-A guard rail (when no longer needed on the Temporary Roads) is in the opinion of the Engineer suitable for Re-Use as permanent guard rail on the Project, the Contractor may use all or a part of the same in place of a like amount of New Rail of the same type as set up in the Plans. The cost of removing and rebuilding of the Rail for Re-Use shall be included in the cost per lineal foot of Item I-15 Guard Rail Steel Beam Type (Deep) No. 2-A as per plan.

Should the guard rail on Temporary Roads not be Re-Used, it shall become the property of the Contractor.

## SALVAGED CURB

Curb removed from CHESTER AVE, PAYNE AVE, SUPERIOR AVE, and STUBER CT. was considered 40% salvagable and curb removed from the remainder of the existing city streets involved was considered unsalvagable (with the exception of the curb removed on EXTRA AREA sheets), for the purpose of determining the amount of curb to be removed for reuse. The amount of curb available for resetting was determined by making a 10% deduction for breakage and dressing of this curb removed for reuse.

If an additional amount of the existing curb to be removed is found to be salvagable, such curb shall be removed as per ITEM E-8 REMOVAL OF EXISTING CURB FOR REUSE and shall be reset as per ITEM E-11 SANDSTONE CURB RESET in the place of I-11 6" x 18" SANDSTONE CURB as called for in the plans.

Salvaged curb shall be placed only within the city street pavement areas affected by this improvement and it shall not be interspersed with new curb, but placed in a continuous line as directed by the Engineer.

## JOINT DETAIL

For spacing and detail of Joints see Standard Drawings and Extra Area Sheets Numbers: 38 thru 48 inclusive.

## SEEDING QUANTITIES

Quantities for Seeding are calculated for the soil areas between R/W Limits as shown on R/W Sheets 51 thru 54 inclusive of the Plans. Also included are Seeding Areas shown in Driveway Quantity Tables on Plan and Profile Sheets in the Plans.

## GRADING OF RAMP LOOPS AND MERGERS

Cross-sections cover proposed grading of ramp loops and mergers with the freeway, however, detailed contour maps of these areas are available at the Division 12 Planning Office.

## L-9 SEEDING AND PROTECTING

Shoulders, roadway ditches, median strips and areas in front of residences and commercial units, unless otherwise directed, shall be seeded with the following mixture:

- 25% Kentucky Bluegrass (*Poa Pratensis*)
- 15% Kentucky 31 Fescue (*Festuca Elation*, Var 31) or Alta Fescue (*Festuca Elation*, Var. Arundinacea)
- 40% Creeping Red Fescue (*Festuca Rubra*)
- 15% Red Top (*Agrostis Alba*)
- 5% White Dutch Clover (*Trifolium Repens*)

The above mixture shall be seeded at the rate of Three (3) Pounds per One Thousand (1000) Square Feet.

Slopes and all other areas, except those previously mentioned, unless otherwise directed, shall be seeded with the following mixture:

- 20% Kentucky Bluegrass (*Poa Pratensis*)
- 45% Kentucky 31 Fescue (*Festuca Elation*, Var 31) or Alta Fescue (*Festuca Elation*, Var. Arundinacea)
- 10% Red Top (*Agrostis Alba*)
- 25% Yellow Blossom Sweet Clover (*Melilotus Officinalis*)

The above mixture shall be seeded at the rate of Three (3) Pounds Per One Thousand (1000) Square Feet.

## L-9 AGRICULTURAL LIMING MATERIALS

Agricultural Liming Materials shall be used in connection with the Seeding, at the rate of One Hundred (100) Pounds per One Thousand (1000) Square Feet.

## L-9 FERTILIZER (10-6-4)

Fertilizer shall be used in connection with all Seeding, and shall be applied at the rate of Twenty (20) Pounds Per One Thousand (1,000) Square Feet.

## SURVEY DATA

For centerline data of existing streets from Central Avenue to Superior Avenue, see Detailed Map No. I-3 [adjusted & Survey Data] on File in Division Office.

## RIGHT OF WAY

For Limits of Right of Way required see Sheets Number: 51, 52, 53 and 54

Parcel numbers used on this project begin with Parcel No 300 and end with Parcel No 581 as shown on the Right of Way Sheets mentioned above. Wherever Section CUY-42R-18.81 is mentioned in the description of these Parcels it shall be considered to read Section CUY-42-19.28

## CURB HEIGHT TRANSITION ON APPROACH SLABS

Uniformly transition the roadway curb height to the structure curb height within the approach slab.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

10  
124

CUYAHOGA COUNTY  
CUY-42-19.28  
CUY-322-(1.08-1.39)

# GENERAL NOTES

## STANDARD PAVED GUTTERS TYPE #1 MODIFIED

Standard Paved Gutter Type #1 is Modified in the Bottom Width Dimension. Use 1'-6" instead of 2'-0" as shown in the standard.

## MANHOLE FRAME AND COVER CASTINGS

The Castings for Manholes shall be the Special Frame and Cover as per City of Cleveland standard as detailed in the Plans.

Salvaged Manhole castings shall be used as noted in the Plans.

## REMOVAL OF EXISTING SEWERS AND SEWER APPURTENANCES IN EXCAVATION

Where Existing Sewers and Sewer Appurtenances are encountered in excavation laying above subgrade or Backslopes, removal of such items shall be included in excavation. Cost of this removal to be included in Item E-101, "Roadway Excavation."

## ABANDONED SEWERS AND DRAINS

The Contractor shall plug or bulkhead all existing sewers and drains which were or are to be abandoned encountered on the project. The Contractor shall provide all materials, labor and equipment to seal the sewers and drains in a manner satisfactory to the Engineer. All costs pertaining to this item of work shall be included in the price bid for Item E-101, "Roadway Excavation" or as noted in the Plans. Satisfactory sealing shall consist of constructing an 8" thick brick masonry bulkhead or equivalent inside the Sewer or Drain.

## RECONNECTING EXISTING CONNECTIONS

Notes on Plan Sheets call for Reconnecting Existing Connections to New Sewers in City Streets. These Connections shall be made in accordance with the "City of Cleveland" Standard Drawings. City of Cleveland will furnish Contractor with Standard Drawings.

## SALVAGED CASTINGS

Castings for Drainage Structures called for in the Plans to be abandoned or removed as per General Note, "Removal of Sewer Appurtenances in Excavation," shall be carefully salvaged and re-used where called for in the Plans or as Directed by the Engineer. In case more salvagable Castings (City Type: Spec. C.I. #4 or C.B. #4) should be available than called for in the Plans to be used as salvage, then the said salvagable Castings should be used in place of New Castings called for on Drainage Structures. The Drainage Structure will then be paid for as the Price Bid for Drainage Structure with Salvage Castings. City Type castings (Spec. C.I. or C.B. #4), and M.H. Castings, not used as salvage on the Project, shall be stored on the site and the City of Cleveland will haul them away. Should the City of Cleveland not claim any or all of the castings, they shall become the property of the Contractor.

## FIELD OFFICE

The State of Ohio, Department of Highways, will make available to the contractor the property at 1866 East 25th Street for a project field office for state personnel only. The contractor shall furnish and equip same in accordance with Section S-0.01(b) of the Construction and Material Specifications. The contractor shall have a telephone installed and maintained during the construction of this project.

## TRAFFIC MAINTENANCE

The Chester Ave. Sewer from E. 24 St. to the Chester Ave. Structure shall be constructed, including reconnecting necessary existing connections and replacing of pavement before the Chester Ave. Temporary Run-Around is opened to traffic. The construction of this sewer shall be achieved as a continuous operation by the Contractor not to exceed a duration of four (4) weeks, during which time one-way Eastbound Traffic on three (3) lanes (minimum pavement width of 30ft.) shall be maintained on Chester Ave. Proposed cross overs for new basins & inlets shall not be constructed during this period but during paving operations described below.

Two-way traffic (three effective lanes in each direction) (on pavement width of 56ft.) shall be maintained on Chester Ave. (U.S.R. 322) and its temporary run-around during the construction of Chester Ave. Structure.

During construction of the Chester Ave. South pavement (After Completion of the Chester Ave. Structure and its approach pavement), one-way Eastbound traffic on three (3) lanes shall be maintained on the existing north pavement & run-around roadway; similarly during construction of the Chester Ave. North Pavement, one-way Eastbound traffic on three (3) lanes shall be maintained on the newly constructed South pavement. These two latter operations shall be accomplished as a continuous operation by the Contractor so as to limit the duration required for one-way traffic to an absolute minimum.

During periods when traffic on Chester Avenue (U.S.R. 322) is limited to three-lane, one-way operation Eastbound, the Westbound traffic on Chester Avenue shall be detoured as shown on Sheet 1.

## DISPOSAL OF SURPLUS EXCAVATION

Surplus excavation may be disposed of between the Memorial Shoreway and Lake Erie in the vicinity of East 40th St. or in the vicinity of East 9th St. Specific fill locations and finished grades in this disposal area shall be as determined by the Engineer.

## LOCAL TRAFFIC

Estimated quantities of aggregate, chloride, and "Asphaltic concrete for maintaining traffic" have been provided in the General Summary for use as directed by the Engineer in maintenance of access and maintenance of existing City Streets within the limits of the project.

## TRAFFIC MAINTENANCE (CONTINUED)

Two-way traffic (five effective lanes) shall be maintained at all times on Superior Avenue (U.S.R. 6 and 20) and two-way traffic (three effective lanes) shall be maintained at all times on Payne Avenue by use of either the existing or proposed pavements and structures or the respective temporary run-around roads, except that a lesser number of effective lanes may be maintained, where specifically directed by the Engineer, during construction of sewers and resurfacing operations. The periods of restriction to less than the above stated number of effective lanes shall be held to an absolute minimum. In no event shall less than two effective lanes be available for maintenance of traffic on Payne Avenue nor shall less than three effective lanes be available for traffic on Superior Avenue.

The Contractor shall cooperate with the City of Cleveland Traffic Engineering Department in the performance of his work in order to conform with the above mentioned requirements.

## ITEM I-21 MEDIAN PAVEMENT

In lieu of the requirements of Standard Construction Drawing I-21-23, expansion joints shall be constructed at intervals of 12.5 ft. on this project. The joints shall be located midway between the guard rail posts. In addition, expansion joint material 1" thick shall be provided around each guard rail post.

## CONSTRUCTION LAYOUT STAKES

See note in proposal for work included in this lump sum pay item.

## ITEM I-15, STD. TYPE 2-B GUARD RAIL, USING STEEL POSTS

Where normal post depth cannot, by reason of interference with proposed structure footings, be obtained for this item, the posts shall be shortened as required and the bottom ends thereof rigidly attached to the structure footings. Details of the proposed method of attachment to the footers shall be submitted by the Contractor to the Engineer and approval obtained before construction of this item is begun. Payment for furnishing and placing this special attachment is included in the unit price bid for this item.

# SUMMARY OF QUANTITIES

## SUMMARY OF EXTRA AREA QUANTITIES

LOCATION	Sheet No	I - 11 6" x 18" SANDSTONE CURB																													
														RADIAL CURB				1" BULLNOSE		BUMPER BLOCK 1" BULLNOSE											
		T-71	T-35	T-35	I-18	I-21	I-22	B-33	B-35	B-35	B-70	E-8	E-8	E-8	E-101	10'	13'	15'	20'	25'	28'	35'	40'	50'	52'	55'	15'	25'			
		9" Reinf. Port. Cem. Concrete Pavement	1 1/2" Asph. Concrete Surface Course	1" Average Asph. Conc. Surface Course	Stabilized Crushed Aggregate For Shoulders	4" Concrete Median Pavement Type I	Subbase	3" Bitum. Macadam Base Course For Shoulders	1 1/2" Asph. Concrete Leveling Course	Sealing Vertical Face of Exist. Pave.	9" Concrete Base Course	Removal & Disposal of Existing Pavement	Removal & Disposal of Existing Curb	Removal for Reuse of Existing Curb	Excavation	Straight 3" Bullnose	Straight 1" Bullnose														
	Sq. Yd.	Sq. Yd.	Sq. Yd.	Cu. Yd.	Sq. Yd.	Cu. Yd.	Sq. Yd.	Sq. Yd.	Lin. Ft.	Sq. Yd.	Sq. Yd.	Lin. Ft.	Lin. Ft.	Cu. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.					
RAMP # 7	270			3		49	20								79.33	41.00										77.84	2.86				
RAMP # 8	622			65		197	510								99.75	219.47											8.00				
RAMP # 9	536	132		33		316	255	132				132	115		119.92	291.74	17.81		62.83						74.81	4.68					
RAMP # 10	826			38		191	298								444.14	157.30											12.27				
RAMP # 11	1217	490		41		364	317	490				490			216.97	191.00									6.995	8.639	8.10				
RAMP # 12	1752			75		1068	531					33	51	44	508.41	88.00	19.83		23.56						123.10		8.04				
RAMP # 13	1052			31		341	244					22			309.51	305.81	30.26		24.75						74.59		4.65				
EAST 25 ST. CUL-DE-SAC		1278				107		830	30	639	11		130	58	370			152.54		16.82				128.83		160.39					
EAST 27 ST. RELOCATION		202	73			34		202		202	18		48	51				57.37				47.12		78.54							
TOTAL I-1057( ) CODE 7221	6275	2102	73	286		2667	2175	1654	30	1463	199		307	153	370			1778.03		1504.23		84.72	95.43	62.83	78.54	128.83	193.05	74.59	160.39	239.04	48.60
RAMP # 7		115				10	19			115																					
RAMP # 8		4				1		4		4																					
RAMP # 10		123				5	23			123																					
TOTAL I-1057( ) CODE 6707		242				15	43			242																					
RAMP # 10		138				40	45			138																					
CHESTER AVE. AT E. 24 ST.		4080				62	717			4080			288		70	168			1439.42			81.74			15716		54.86	188.38		23.38	
CHESTER AVE. AT E. 30 ST.		3632				124	683			3632									1066.48						75.81		118.68		23.58		
TOTAL U-234( ) CODE 6707		7850				226	1445			7850			288		70	168			2684.82			81.74			232.97		54.86	307.06		46.96	

### E-II WATER @ 5 GAL. PER CU. YD.

Embankment from Earthwork Table	Sheet No 13	= 8182 Cu.Yd. x 5 ÷ 1000	= 40.9 M.Gal.
I-22 Subbase Material	Sheet No 14	= 18010 " " x 5 ÷ 1000	= 90.1 " "
I-18 Stabilized Crushed Aggregate	Sheet No 15	= 1358 " " x 5 ÷ 1000	= 6.8 " "
<b>TOTAL E-II WATER [I-1057( ) CODE 722]</b>			<b>= 137.8 M.GAL.</b>
Embankment from Earthwork Table	Sheet No 13	= 581 Cu.Yd. x 5 ÷ 1000	= 2.9 M.Gal.
I-22 Subbase Material	Sheet No 15	= 1216 " " x 5 ÷ 1000	= 6.1 " "
I-18 Stabilized Crushed Aggregate	Sheet No 15	= 329 " " x 5 ÷ 1000	= 1.7 " "
<b>TOTAL E-II WATER [I-1057( ) CODE 6707]</b>			<b>= 10.7 M.GAL.</b>
Embankment from Earthwork Table	Sheet No 13	= 1579 Cu.Yd. x 5 ÷ 1000	= 7.9 M.Gal.
I-22 Subbase Material	Sheet No 15	= 2169 Cu.Yd. x 5 ÷ 1000	= 10.9 " "
<b>TOTAL E-II WATER [U-234( ) CODE 6707]</b>			<b>= 18.8 M.GAL.</b>



# SUMMARY OF QUANTITIES

6" PIPE UNDERDRAINS									
SHEET No.	REFERENCE NUMBER		I-4 LIN. FT.					I-5 EACH PIPE SPECIALS	
			CURB 5'-0" DEEP	CURB SHALLOW	5'-0" DEEP	SHALLOW	* OUTLETS FOR UNDERDRAINS	INTERCEPTING M-6.4(h)	6"
	FROM	TO							
20	2-F	6-F	20		907	50			1
21	1-F	5-F	286		1702		6		1
22	1-F	2-F			1785				
24	1-F	4-F	214		214		2		1
25	1-F	2-F	734		858				
26	1-F	4-F	1065		796				
27	1-F	4-F	676	432	844		26		2
28	1-F	4-F	864		1042		22		3
29	1-F	4-F	502	280	636		24		2
33	1-F	4-F		486			90		3
35	1-F	4-F		316			18		3
37	1-F	2-F		668			40		1
90							225	2600	*9
CODE 7221 TOTAL-I-1057( )			4361	2182	8784	50	*453	2600	17*9
30 3-F to 10-F 12-F & 13-E				3038			34		6
CODE 6707 TOTAL-I-1057( )				3038			*34		6
30 1-F to 3-F 8-F & 11-F				518			92		2
32 1-F 6-F				1864			88		1
CODE-6707 TOTAL-U-234( )				2382			*180		3
GRAND TOTAL-I-1057( )			4361	5220	8784	50	*487	2600	23*9
GRAND TOTAL			4361	7602	8784	50	*667	2600	26*9

\* SEC. M-6.4(h) WITHOUT PERFORATIONS

EARTHWORK					
LOCATION	STATION		EXCAVATION	EMBANKMENT	EMB.+22%
	FROM	TO	Cu. Yds.	Cu. Yds.	Cu. Yds.
INNER BELT NORTH & SOUTH BOUND	25+00	30+00	111,412	0	0
	30+00	40+00	185,012	0	0
	40+00	51+00	206,057	36	44
RAMP #10 & #11	3+34.28	7+00	12,646	1,047	1,277
RAMP #12 E. 30 <sup>TH</sup> ST. CONN.	6+22.19	8+50	6,151	26	32
EAST 24 <sup>TH</sup> ST.	0+50	3+49	1,186	3	4
SUMMARY OF DRIVEWAY QUANTITIES SH.No.13			40	43	53
EXCAVATION DEDUCTIONS FOR BASEMENTS*			-20,326		
EMBANKMENT ADDITIONS FOR BASEMENTS*				3,387	4,132
BACKFILL - INNER BELT CROSS SECTION STA. 26+22 TO STA. 27+50				3,640	4,441
SUMMARY OF EXTRA AREA QUANTITIES SH.No.11			370		
REVISIONS IN TYPICAL SECTIONS			4,903		
TOTALS I-1057( ) CODE 7221			507,451	8,182	9,983
CHESTER AVE.	1+61.18	6+00	3,369	346	422
CHESTER AVE.	8+00	12+05.44	2,355	235	286
SUMMARY OF DRIVEWAY QUANTITIES SH.No.13			53		
TOTALS I-1057( ) CODE 6707			5,777	581	708
CHESTER AVE.	0-664	1+61.18	5,251	146	178
CHESTER AVE.	12+05.44	16+55.85	1,831	82	100
EAST 24 <sup>TH</sup> ST.	0-175	0-100	105	0	0
SUMMARY OF DRIVEWAY QUANTITIES SH.No.13			144	4	5
EMBANKMENT ADDITIONS FOR BASEMENTS*				1,347	1,643
TOTALS U-234( ) CODE 6707			7,331	1,579	1,926

\* BASEMENT VOLUMES CALCULATED FROM FIELD MEASUREMENTS

L-9 ROADSIDE IMPROVEMENT			
LOCATION	STATION		SEEDING & PROTECTING
	FROM	TO	Sq. Yds.
INNER BELT NORTH & SOUTH BOUND	35+00	51+00	54,783
RAMPS #10 & #11	3+34.28	7+00	9,307
RAMP #12, E. 30 <sup>TH</sup> ST. CONN.	6+22.19	8+50	3,075
EAST 24 <sup>TH</sup> ST.	0+50	3+49	984
SUMMARY OF DRIVEWAY QUANTITIES SH.No.13			110
ADDITIONAL AREAS* - CHESTER AVE. TO PAYNE AVE.			7,689
ADDITIONAL AREAS* - PAYNE AVE. TO SUPERIOR AVE.			8,811
TOTALS I-1057( ) CODE 7221			84,759
CHESTER AVE.	1+61.18	6+00	2,322
CHESTER AVE.	8+00	12+05.44	1,882
TOTALS I-1057( ) CODE 6707			4,204
CHESTER AVE.	0-664	1+61.18	3,180
CHESTER AVE.	12+05.44	16+55.85	1,168
EAST 24 <sup>TH</sup> ST.	0-175	0-100	84
TOTALS U-234( ) CODE 6707			4,432

\*ADDITIONAL AREAS CALCULATED FROM TOP OF SLOPE TO RIGHT OF WAY LINE AND NOT INCLUDED IN CROSS SECTIONS

### AGRICULTURAL LIMING MATERIAL:

I-1057( ) CODE 7221  $84,759 \times 9 = 762,831 \text{ Sq. Ft.}$   
 $\frac{762,831 \times 100}{1000 \times 2000} = 38.142 \text{ TONS}$

I-1057( ) CODE 6707  $4,204 \times 9 = 37,836 \text{ Sq. Ft.}$   
 $\frac{37,836 \times 100}{1000 \times 2000} = 1.892 \text{ TONS}$

U-234( ) CODE 6707  $4,432 \times 9 = 39,888 \text{ Sq. Ft.}$   
 $\frac{39,888 \times 100}{1000 \times 2000} = 1.994 \text{ TONS}$

### COMMERCIAL FERTILIZER:

I-1057( ) CODE 7221  $84,759 \times 9 = 762,831 \text{ Sq. Ft.}$   
 $\frac{762,831 \times 20}{1000 \times 2000} = 7.628 \text{ TONS}$

I-1057( ) CODE 6707  $4,204 \times 9 = 37,836 \text{ Sq. Ft.}$   
 $\frac{37,836 \times 20}{1000 \times 2000} = 0.378 \text{ TONS}$

U-234( ) CODE 6707  $4,432 \times 9 = 39,888 \text{ Sq. Ft.}$   
 $\frac{39,888 \times 20}{1000 \times 2000} = 0.399 \text{ TONS}$

EARTHWORK RECAP		
ITEMS	AVAILABLE EMBANKMENT	REQUIRED EMBANKMENT+22%
	Cu. Yds.	Cu. Yds.
TOTALS I-1057( ) CODE 7221	507,451	9,983
TOTALS I-1057( ) CODE 6707	5,777	708
TOTALS U-234( ) CODE 6707	7,331	1,926
PAV'T. REMOVAL SH.No.(16)(23644x135:36)	887	
PAV'T. REMOVAL SH.No.(16)(19463x11:36)	5,947	
PAV'T. REMOVAL SH.No.(16)(1051.2x6:36)	175	
PAV'T. REMOVAL SH.No.(16)(83678x4:36)	930	
PAV'T. REMOVAL SH.No.(16)(3212.0x8:36)	714	
SIDEWALK REMOVAL SH.No.(12)(75,898x4:32)	937	
TOTAL EMBANKMENT AVAILABLE	530,149	
TOTAL REQUIRED EMBANKMENT+22%		12,617
TOTAL SURPLUS EXCAVATION	517,532	

SHEET No.	E-101 EXCAVATION	E-8 REMOVAL & DISPOSAL EXIST. PAV'T.	E-8 REMOVAL & DISPOSAL EXIST. CURB STRUCTURES	S-22	T-35 ASPHALTIC CONC. SURF. COURSE	T-70 CONCRETE PAVEMENT	T-30 BRUMINOUS PRIME COAT	I-18 CRUSHED AGGREGATE BASE	I-11 6"x18 S.S. CURB 1" BULLNOSE	L-9 SEEDING & PROTECTING	SUMMARY OF DRIVEWAY QUANTITIES	
											Sq. Yds.	Lin. Ft.
21											75	
25											35	
27												
28												
29												
30												
33												
35												
89												
TOTALS I-1057( ) CODE 7221	40	43	1287	156		170					110	
30												
87												
88												
TOTALS I-1057( ) CODE 6707	53	285	285		1056	99	370	205			156	
30					638	93	223	124				
32												
86												
TOTALS U-234( ) CODE 6707	144	285	285		1694	192	593	329				
30												
32												
86												
TOTALS U-234( ) CODE 6707	144	541	541		288	288						

CUY-42-19.28  
CUY-322-(1.08-139)  
CUYAHOGA COUNTY

# CALCULATIONS

## T-71 9" REINF. CONCRETE PAVEMENT

Innerbelt Northbound	Sta. 25+00 to Sta. 27+09.87	= 209.87 Lin. Ft. (Sta. Equation)
" "	Sta. 26+61.13 to Sta. 36+00	= 938.87 " "
" "	Sta. 39+94.14 to Sta. 42+04.60	= 210.46 " "
Innerbelt Southbound	Sta. 27+30 to Sta. 34+50	= 720.00 " "
" "	Sta. 39+00 to Sta. 40+14.16	= 114.16 " "
		2193.36 Lin. Ft. x 36 ÷ 9 = 8773.44 Sq. Yd.
Innerbelt Northbound	Sta. 36+00 to Sta. 39+94.14	= 394.14 Lin. Ft.
Innerbelt Southbound	Sta. 25+00 to Sta. 27+09.87	= 209.87 " " (Sta. Equation)
" "	Sta. 26+61.13 to Sta. 27+30	= 68.87 " "
" "	Sta. 34+50 to Sta. 39+00	= 450.00 " "
		1122.88 Lin. Ft. x 48 ÷ 9 = 5988.69 Sq. Yd.
Innerbelt Northbound	Sta. 42+04.60 to Sta. 51+00	= 895.40 Lin. Ft.
Innerbelt Southbound	Sta. 40+14.16 to Sta. 51+00	= 1085.84 " "
		1981.24 Lin. Ft. x 38 ÷ 9 = 8365.24 Sq. Yd.
Ramp No 11	Sta. 2+55.94 to Sta. 8+18	= 562.06 Lin. Ft.
Ramp No 12	Sta. 2+72.52 to Sta. 4+06.29	= 133.77 " "
" " "	Sta. 5+27.03 to Sta. 7+19	= 191.97 " "
" " " (E. 30 St. Conn.)	Sta. 5+53.18 to Sta. 7+19	= 225.82 " "
		1113.62 Lin. Ft. x 24 ÷ 9 = 2969.65 " "
Ramp No 10	Sta. 1+23.60 to Sta. 5+09.06	= 385.46 Lin. Ft.
" " " (Chester Conn.)	Sta. 6+36.94 to Sta. 8+14.26	= 177.32 " "
		562.78 Lin. Ft. x 18 ÷ 9 = 1125.56 " "
Ramp No 9	Sta. 2+23.97 to Sta. 8+62.09	= 638.12 Lin. Ft.
Ramp No 13	Sta. 1+63.71 to Sta. 5+31.43	= 367.72 Lin. Ft.
		1005.84 Lin. Ft. x 16 ÷ 9 = 1788.16 " "
Summary of Extra Area Quantities [I-1057 ( ) Code 722] Sheet No 111		= 6275.00 " "

TOTAL T-71 9" REINFORCED CONCRETE PAVEMENT [I-1057 ( ) CODE 722] = 35285.74 SQ. YD.

## I-7 REINFORCED CONCRETE APPROACH SLABS (T=13")

Superior Ave.	2 x 25 x 76 ÷ 9	= 422.22 Sq. Yd.
Payne Ave.	2 x 25 x 56 ÷ 9	= 311.11 " "
Chester Ave.	2 x 25 x 70 ÷ 9	= 388.89 " "
TOTAL I-7 REINFORCED CONCRETE APPROACH SLABS (T-13) [I-1057 ( ) CODE 722]		= 1122.22 " "

## I-22 SUBBASE

Innerbelt Northbound	Sta. 25+00 to Sta. 27+09.87	= 209.87 Lin. Ft.
" "	Sta. 26+61.13 to Sta. 34+00	= 738.87 " "
Innerbelt Southbound	Sta. 27+30 to Sta. 34+00	= 670.00 " "
		1618.74 Lin. Ft. x 36 ÷ 54 = 1079.16 Cu. Yd.
Innerbelt Northbound	Sta. 34+00 to Sta. 36+00	= 200.00 Lin. Ft.
" "	Sta. 39+94.14 to Sta. 42+04.60	= 210.46 " "
Innerbelt Southbound	Sta. 34+00 to Sta. 34+50	= 50.00 " "
" "	Sta. 39+00 to Sta. 40+14.16	= 114.16 " "
		574.62 Lin. Ft. x 36 ÷ 18 = 1149.24 Cu. Yd.

## I-22 SUBBASE (CON'T)

Innerbelt Southbound	Sta. 25+00 to Sta. 27+09.87	= 209.87 Lin. Ft.
" "	Sta. 26+61.13 to Sta. 27+30	= 68.87 " "
		278.74 Lin. Ft. x 48 ÷ 54 = 247.77 Cu. Yd.
Innerbelt Northbound	Sta. 36+00 to Sta. 39+94.14	= 394.14 Lin. Ft.
Innerbelt Southbound	Sta. 34+50 to Sta. 39+00	= 450.00 " "
		844.14 Lin. Ft. x 48 ÷ 18 = 2251.04 Cu. Yd.
Innerbelt Northbound	Sta. 42+04.60 to Sta. 51+00	= 895.40 Lin. Ft.
Innerbelt Southbound	Sta. 40+14.16 to Sta. 51+00	= 1885.84 " "
		1981.24 Lin. Ft. x 38 ÷ 18 = 4182.62 Cu. Yd.
Ramp No 11	Sta. 2+55.94 to Sta. 8+18	= 562.06 Lin. Ft. x 24 ÷ 54 = 249.80 Cu. Yd.
Ramp No 10	Sta. 1+23.60 to Sta. 5+09.06	= 385.46 Lin. Ft.
" " " (Chester Conn.)	Sta. 6+36.94 to Sta. 8+14.26	= 177.32 Lin. Ft.
		562.78 Lin. Ft. x 18 ÷ 54 = 187.59 Cu. Yd.
Ramp No 9	Sta. 2+23.97 to Sta. 8+62.09	= 638.12 Lin. Ft. x 16 ÷ 54 = 189.07 Cu. Yd.
Ramp No 12	Sta. 2+72.52 to Sta. 4+06.29	= 133.77 Lin. Ft.
" " "	Sta. 5+27.03 to Sta. 7+19	= 191.97 Lin. Ft.
" " " (E. 30 St. Conn.)	Sta. 5+53.18 to Sta. 7+19	= 225.82 Lin. Ft.
		551.56 Lin. Ft. x 24 ÷ 18 = 735.41 Cu. Yd.
Ramp No 13	Sta. 1+63.71 to Sta. 5+31.43	= 367.72 Lin. Ft. x 16 ÷ 18 = 326.86 Cu. Yd.
East 27 St. Relocation	Sta. 0+30 to Sta. 3+47.53	= 377.53 Lin. Ft. x 32 ÷ 54 = 223.72 Cu. Yd.
East 24 St.	Sta. 0+60.23 to Sta. 2+02	= 141.77 Lin. Ft. x 44 ÷ 54 = 115.52 Cu. Yd.
Superior Ave.	(Approach Slabs)	= 50.00 Lin. Ft. x 76 ÷ 54 = 70.37 Cu. Yd.
Payne Ave.	(Approach Slabs)	= 50.00 Lin. Ft. x 56 ÷ 54 = 51.85 Cu. Yd.

## UNDER PAVED BERMS

Innerbelt Northbound	Sta. 29+00 to Sta. 31+75	= 275.00 Lin. Ft.
Innerbelt Southbound	Sta. 25+00 to Sta. 27+09.87	= 209.87 Lin. Ft.
" "	Sta. 26+61.13 to Sta. 27+30	= 68.87 " "
" "	Sta. 28+80 to Sta. 31+80	= 300.00 " "
		853.74 Lin. Ft. x 5.50 ÷ 27 = 173.91 Cu. Yd.
Innerbelt Northbound	Sta. 36+00 to Sta. 39+94.14	= 394.14 Lin. Ft.
" "	Sta. 43+50 to Sta. 51+00	= 750.00 Lin. Ft.
Innerbelt Southbound	Sta. 34+50 to Sta. 39+00	= 450.00 Lin. Ft.
" "	Sta. 41+75 to Sta. 51+00	= 925.00 Lin. Ft.
		2519.14 Lin. Ft. x 10.53 ÷ 27 = 982.46 Cu. Yd.
Ramp No 9	Sta. 2+23.97 to Sta. 8+62.09	= 638.12 Lin. Ft.
Ramp No 10	Sta. 1+23.60 to Sta. 5+09.06	= 370.97 Lin. Ft.
" " " (Chester Ave. Conn.)	Sta. 6+36.94 to Sta. 8+14.26	= 159.25 Lin. Ft.
Ramp No 11	Sta. 2+55.94 to Sta. 8+18	= 536.83 Lin. Ft.
		1705.17 Lin. Ft. x 4.25 ÷ 27 = 268.41 Cu. Yd.
Ramp No 12	Sta. 2+72.52 to Sta. 4+06.29	= 133.77 Lin. Ft.
" "	Sta. 5+27.03 to Sta. 7+19	= 191.97 " "
" " " (E 30 ST. Conn.)	Sta. 5+53.18 to Sta. 7+19	= 220.30 " "
Ramp No 13	Sta. 1+63.71 to Sta. 5+31.43	= 366.04 Lin. Ft.
		912.08 Lin. Ft. x 8.33 ÷ 27 = 281.39 Cu. Yd.
Innerbelt (Median)	Sta. 25+00 to Sta. 27+09.87	= 209.87 Lin. Ft.
" "	Sta. 26+61.13 to Sta. 34+00	= 738.87 " "
		948.74 Lin. Ft. x 16.0 ÷ 27 = 562.22 Cu. Yd.
Innerbelt (Median)	Sta. 34+00 to Sta. 51+00	= 1700.00 Lin. Ft. x 32.0 ÷ 27 = 2014.81 Cu. Yd.
Summary of Extra Area Quantities [I-1057 ( ) Code 722] Sheet No 11		= 2667.00 Cu. Yd.

TOTAL I-22 SUBBASE [I-1057 ( ) CODE 722]

18010.22 Cu. Yd.

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## I-22 SUBBASE (CONTINUED)

Chester Ave. Sta. 1+61.18 to Sta. 6+26.21 = 465.03 Lin. Ft.  
Chester Ave Sta. 7+65.73 to Sta. 12+05.44 = 439.71 " "  
904.74 Lin. Ft. x 350 ÷ 27 = 1172.81 Cu. Yd.  
Summary of Extra Area Quantities [I-1057( ) Code 6707] Sheet No 11 = 4300 Cu. Yd.  
TOTAL I-22 SUBBASE [I-1057( ) CODE 6707] = 1215.81 CU. YD.

Chester Ave. Sta. 0-307.42 to Sta. 1+61.18 = 468.60 Lin. Ft.  
Chester Ave. Sta. 12+05.44 to Sta. 12+95.57 = 90.13 " "  
558.73 Lin. Ft. x 35.0 ÷ 27 = 724.28 Cu. Yd.  
Summary of Extra Area Quantities [U-234( ) Code 6707] Sheet No 11 = 1445.00 Cu. Yd.  
TOTAL I-22 SUBBASE [U-234( ) CODE 6707] = 2169.28 CU. YD.

## I-21 4" CONCRETE MEDIAN PAVEMENT

Innerbelt Sta. 25+00 to Sta. 51+00 = 2648.74 Lin. Ft. x 9 ÷ 9 = 2648.74 Sq. Yd.  
TOTAL 4" CONCRETE MEDIAN PAVEMENT [I-1057( ) CODE 722] = 2648.74 SQ. YD.  
Summary of Extra Area Quantities [I-1057( ) Code 6707] Sheet No 11 = 15.00 Sq. Yd.  
TOTAL 4" CONCRETE MEDIAN PAVEMENT [I-1057( ) CODE 6707] = 15.00 SQ. YD.  
Summary of Extra Area Quantities [U-234( ) Code 6707] Sheet No 11 = 226.00 Sq. Yd.  
TOTAL 4" CONCRETE MEDIAN PAVEMENT [U-234( ) CODE 6707] = 226.00 SQ. YD.

## I-18 STABILIZED CRUSHED AGGREGATE

See "I-22 under paved berms" for stationing:  
Innerbelt = 853.74 + 2519.14 = 3372.88 Lin. Ft. x 3.84 ÷ 27 = 479.70 Cu. Yd.  
Ramps = 1691.17 + 912.08 = 2603.25 " " x 3.09 ÷ 27 = 297.93 Cu. Yd.  
Innerbelt (Median Berms) = 948.74 + 1700.00 = 2648.74 " " x 3.00 ÷ 27 = 294.30 Cu. Yd.  
Summary of Extra Area Quantities [I-1057( ) Code 722] Sheet No 11 = 286.00 Cu. Yd.  
TOTAL I-18 STABILIZED CRUSHED AGGREGATE [I-1057( ) CODE 722] = 1357.93 CU. YD.  
Summary of Driveway Quantities [I-1057( ) Code 6707] Sheet No 13 = 329 Cu. Yd.  
TOTAL I-18 STABILIZED CRUSHED AGGREGATE [I-1057( ) CODE 6707] = 329 CU. YD.

## B-33 3" BITUMINOUS MACADAM BASE COURSE

See "I-22 under paved berms" for stationing:  
Innerbelt = 3372.88 Lin. Ft. x 10 ÷ 9 = 3747.64 Sq. Yd.  
Ramps = 2603.25 " " x 8 ÷ 9 = 2314.00 Sq. Yd.  
Innerbelt (Median Berms) = 2648.74 " " x 6 ÷ 9 = 1765.83 Sq. Yd.  
Summary of Extra Area Quantities [I-1057( ) Code 722] Sheet No 11 = 2175.00 Sq. Yd.  
TOTAL B-33 3" BITUMINOUS MACADAM BASE COURSE [I-1057( ) CODE 722] = 10002.47 SQ. YD.

## T-30 BITUMINOUS PRIME COAT @ 0.35 GAL/SQ. YD.

B-33 Bituminous Macadam Base Course [I-1057( ) Code 722] = 10,002.47 Sq. Yd. x 0.35 = 3500.86 GAL.  
Summary of Driveway Quantities [I-1057( ) Code 6707] Sheet No 13 = 593 GAL.

## T-31 BITUMINOUS SURFACE TREATMENT [I-1057( ) CODE 722]

Bituminous Material as per plan = 10,002.47 Sq. Yd. x 0.50 = 5002 GAL.  
No 6 Aggregate = 10,002.47 Sq. Yd. x 0.008 = 80 CU. YD.  
No. 4 6 Aggregate = 10,002.47 Sq. Yd. x 0.008 = 80 CU. YD.

## T-35 ASPHALTIC CONCRETE SURFACE COURSE

Superior Ave. { Sta. 0+75 to Sta. 1+57.69 } 171.36 x 76 = 13023.36 Sq. Ft.  
                  { Sta. 3+86.33 to Sta. 4+75 }  
Payne Ave. { Sta. 4+50 to Sta. 5+11.29 } 125.48 x 56 = 7026.88 Sq. Ft.  
                  { Sta. 7+35.81 to Sta. 8+00 }  
East 27 St. Reloc. Sta. 0-30 to Sta. 3+47.53 = 377.53 x 32 = 12080.96 Sq. Ft.  
E. 24 St. Sta. 0+60.23 to Sta. 2+02 = 141.77 x 44 = 6237.88 Sq. Ft.  
SUB-TOTAL 0.125 ÷ 27 = 38369.08 Sq. Ft. = 177.63 Cu. Yd.

Summary of Extra Area Quantities (1/2" Thickness) Sheet No 11 = 2102 Sq. Yd. x 0.125 ÷ 3 = 87.58 Cu. Yd.  
Summary of Extra Area Quantities (1" Av. Thickness) Sheet No 11 = 73 Sq. Yd. x 0.083 ÷ 3 = 2.02 Cu. Yd.  
Summary of Storm Sewer Quantities (2 1/2" Thickness) Sheet No 12 = 43.10 Cu. Yd.  
TOTAL T-35 ASPHALT. CONCR. SURF. COURSE [I-1057( ) CODE 722] = 310.33 CU. YD.

Chester Ave. { Sta. 1+61.18 to Sta. 6+26.21 } = 904.74 Lin. Ft. x 70 x 0.125 ÷ 27 = 293.20 Cu. Yd.  
                  { Sta. 7+65.73 to Sta. 12+05.44 }  
Summary of Extra Area Quantities Sheet No 11 = 242 Sq. Yd. x 0.125 ÷ 3 = 10.08 Cu. Yd.  
Summary of Driveway Quantities (2") Sheet No 13 = 1694 Sq. Yd. x 0.167 ÷ 3 = 94.30 Cu. Yd.  
TOTAL T-35 ASPHALT. CONCR. SURFACE COURSE [I-1057( ) CODE 6707] = 397.58 CU. YD.  
Chester Ave. { Sta. 0-307.42 to Sta. 1+61.18 } = 558.73 Lin. Ft. x 70 x 0.125 ÷ 27 = 181.07 Cu. Yd.  
                  { Sta. 12+05.44 to Sta. 12+95.57 }  
Summary of Extra Area Quantities Sheet No 11 = 7850 Sq. Yd. x 0.125 ÷ 3 = 327.08 Cu. Yd.  
TOTAL T-35 ASPHALT. CONCR. SURFACE COURSE [U-234( ) CODE 6707] = 508.15 CU. YD.

## T-30 BITUMINOUS TACK COAT @ 0.10 GAL./SQ. YD.

Sub-Total from T-35 Calculations Sheet No 15 = 38,369.08 Sq. Ft. ÷ 9 x 0.10 = 426.32 Gal.  
Summary of Extra Area Quantities (T-35) Sheet No 11 = (2102 + 73) Sq. Yd. x 0.10 = 217.50 Gal.  
Summary of Storm Sewer Quantities (T-35) Sheet No 12 = 43.1 Cu. Yd. ÷  $\frac{0.208}{3}$  x 0.10 = 62.16 Gal.  
TOTAL T-30 BITUMINOUS TACK COAT [I-1057( ) CODE 722] = 705.98 GAL.  
Total T-35 Asph. Concr. Surf. Course [I-1057( ) Code 6707] Less Drives = 303.28 Cu. Yd. ÷  $\frac{0.125}{3}$  x 0.10 = 727.87 Gal.  
TOTAL T-30 BITUMINOUS TACK COAT [I-1057( ) CODE 6707] = 727.87 GAL.  
Total T-35 Asph. Concr. Surf. Course [U-234( ) Code 6707] = 508.15 Cu. Yd. ÷  $\frac{0.125}{3}$  x 0.10 = 1,219.56 Gal.  
TOTAL T-30 BITUMINOUS TACK COAT [U-234( ) CODE 6707] = 1,219.56 GAL.

## B-35 ASPHALTIC CONCRETE LEVELING COURSE

Sub-Total from T-35 Calculations Sheet No 15 = 177.63 Cu. Yd.  
Summary of Extra Area Quantities Sheet No 11 = 1654 Sq. Yd. x  $\frac{0.125}{3}$  = 68.92 Cu. Yd.  
TOTAL B-35 ASPHALT. CONCR. LEVELING COURSE [I-1057( ) CODE 722] = 246.55 CU. YD.  
Total T-35 Asphaltic Concrete Surface Course [I-1057( ) Code 6707] Less Drives = 419.88 Cu. Yd.  
TOTAL B-35 ASPHALT. CONCR. LEVELING COURSE [I-1057( ) CODE 6707] = 419.88 CU. YD.  
Total T-35 Asphaltic Concrete Surface Course [U-234( ) Code 6707] = 508.15 Cu. Yd.  
TOTAL B-35 ASPHALT. CONCR. LEVELING COURSE [U-234( ) CODE 6707] = 508.15 CU. YD.



# CALCULATIONS

## B-70 9" CONCRETE BASE COURSE

E. 27 St. Reloc. Sta. 0-30 to Sta. 3+47.53	=	377.53 × 32 ÷ 9	=	1342.32 Sq.Yd.
E. 24 St. Sta. 0+60.23 to Sta. 2+02	=	141.77 × 44 ÷ 12	=	519.82 Sq.Yd.
Summary of Storm Sewer Quantities		Sheet No 12	=	618.00 Sq.Yd.
Summary of Extra Area Quantities		Sheet No 11	=	1463.00 Sq.Yd.
<b>TOTAL B-70 9" CONCRETE BASE COURSE [I-1057( ) CODE 722]</b>			=	<b>3,943.14 SQ.YD.</b>
Total T-35 Asph. Concr. Surf. Course [I-1057( ) Code 6707] Less Drives = 303.28 Cu.Yd. ÷ $\frac{0.125}{3}$			=	7,278.72 Sq.Yd.
<b>TOTAL B-70 9" CONCRETE BASE COURSE [I-1057 ( ) CODE 6707]</b>			=	<b>7,278.72 SQ.YD.</b>
Total T-35 Asph. Concr Surf. Course [U-234( ) Code 6707] = 508.15 Cu.Yd. ÷ $\frac{0.125}{3}$			=	12,195.60 Sq.Yd.
<b>TOTAL B-70 9" CONCRETE BASE COURSE [U-234 ( ) CODE 6707]</b>			=	<b>12,195.60 SQ.YD.</b>

## E-8 REMOVAL AND DISPOSAL OF EXIST. PAVEMENT

Superior Ave. Sta. 1+32 to Sta. 4+12	=	280 Lin.Ft. × 76 ÷ 9	=	2364.4 Sq.Yd.
Payne Ave. Sta. 4+86 to Sta. 7+61	=	275 " " × 56 ÷ 9	=	1711.1 Sq.Yd.
E. 26 St (Payne to Superior) {Sta. 0+28 to Sta. 0+84}	=	870 " " × 32 ÷ 9	=	3093.3 Sq.Yd.
{Sta. 1+50 to Sta. 9+64}				
E. 26 St. (Chester to Payne) {Sta. 0+20 to Sta. 1+00}	=	943 " " × 22 ÷ 9	=	2305.1 Sq.Yd.
{Sta. 1+80 to Sta. 10+43}				
E. 27 St. (Payne to Superior) {Sta. 5+74 to Sta. 8+75}	=	352 " " × 32 ÷ 9	=	1251.6 Sq.Yd.
{Sta. 9+55 to Sta. 10+06}				
E. 25 St. (Chester to Payne) Sta. 0+20 to Sta. 3+62	=	342 " " × 30 ÷ 9	=	1140.0 Sq.Yd.
E. 25 Pl. Sta. 0+20 to Sta. 3+45	=	325 " " × 16 ÷ 9	=	577.8 Sq.Yd.
E. 24 St. (Chester to Payne) Sta. 0+60.23 to Sta. 3+49	=	289 " " × 30 ÷ 9	=	963.3 Sq.Yd.
Stuber Ct. Sta. 1+73 to Sta. 4+23	=	250 " " × 12 ÷ 9	=	333.3 Sq.Yd.
Alabama Ct. (300 × 12 + 150 × 11.5 + 16 × 16) ÷ 9	=		=	620.1 Sq.Yd.
Payne Ct. 55 Lin.Ft. × 16 ÷ 9	=		=	97.8 Sq.Yd.
Additional for returns at intersections	=		=	138.6 Sq.Yd.
Summary of Extra Area Quantities		Sheet No 11	=	199.0 Sq.Yd.
Summary of Driveway Quantities		Sheet No 13	=	1287.0 Sq.Yd.
Summary of Storm Sewer Quantities		Sheet No 12	=	738.0 Sq.Yd.
<b>TOTAL E-8 REMOVAL AND DISP. OF EXIST. PAVT. [I-1057 ( ) CODE 722]</b>			=	<b>16,820.4 SQ.YD.</b>
Chester Ave. Sta. 1+61.18 to Sta. 12+05.44 = 1045 Lin.Ft. × 56 ÷ 9	=		=	6502.2 Sq.Yd.
Summary of Driveway Quantities		Sheet No 13	=	285.0 Sq.Yd.
Summary of Storm Sewer Quantities		Sheet No 12	=	521.0 Sq.Yd.
<b>TOTAL E-8 REMOVAL AND DISP. OF EXIST. PAVT. [I-1057 ( ) CODE 6707]</b>			=	<b>7308.2 SQ.YD.</b>
Chester Ave. {Sta. 0-664.14 to Sta. 1+61.18}	=	1277 Lin.Ft × 56 ÷ 9	=	7945.8 Sq.Yd.
{Sta. 12+05.44 to Sta. 16+55.85}				
E. 24 St. (Euclid to Chester) Sta. 0-36 to Sta. 0-175	=	139 " " × 38 ÷ 9	=	586.9 Sq.Yd.
E. 24 St. (Chester to Payne) Sta. 0+20 to Sta. 0+60.23	=	41 " " × 30 ÷ 9	=	136.7 Sq.Yd.
E. 30 St. {Sta. 0-36 to Sta. 0-150}	=	139 " " × 40 ÷ 9	=	617.8 Sq.Yd.
{Sta. 0+20 to Sta. 0+44.85}				
Additional for returns at intersections	=		=	76.5 Sq.Yd.
Summary of Extra Area Quantities		Sheet No 11	=	288.0 Sq.Yd.
Summary of Driveway Quantities		Sheet No 13	=	541.0 Sq.Yd.
Summary of Storm Sewer Quantities		Sheet No 12	=	139.0 Sq.Yd.
<b>TOTAL E-8 REMOVAL AND DISP. OF EXIST. PAVT. [U-234 ( ) CODE 6707]</b>			=	<b>10,331.7 SQ.YD.</b>

## E-8 REMOVAL AND DISPOSAL OF EXIST. WEARING COURSE

Superior Ave. {Sta. 0+75 to Sta. 1+32}	=	120 Lin.Ft. × 76 ÷ 9	=	1013 Sq.Yd.
{Sta. 4+12 to Sta. 4+75}				
Payne Ave. {Sta. 4+50 to Sta. 4+86}	=	75 Lin.Ft. × 56 ÷ 9	=	467 " "
{Sta. 7+61 to Sta. 8+00}				
<b>TOTAL E-8 REMOVAL AND DISPOSAL OF EXIST. WEAR. COURSE [I-1057( ) CODE 722]</b>			=	<b>1480. SQ.YD.</b>

## E-8 REMOVAL AND DISPOSAL OF EXIST. CURB

E. 26 St. Superior to Payne	=	1726 Lin.Ft.
E. 27 St. Superior South	=	729 " "
E. 24 St. Chester North	=	568 " "
E. 25 Pl. Chester North	=	47 " "
E. 26 St. Chester to Payne	=	1943 " "
Superior Ave. Payne Ave. and Stuber Ct. (See "Removal for Reuse" Calc.) 1658-663	=	995 " "
Summary of Extra Area Quantities		Sheet No 11 = 307 " "
Summary of Driveway Quantities		Sheet No 13 = 156 " "
<b>TOTAL E-8 REMOVAL AND DISPOSAL OF EXIST. CURB [I-1057 ( ) CODE 722]</b>		<b>6471 LIN.FT.</b>
Chester Ave. Sta. 1+61.18 to Sta. 12+05.44 (See "Removal for Reuse" Calc.) 1663-665	=	998 Lin.Ft.
<b>TOTAL E-8 REMOVAL AND DISPOSAL OF EXIST. CURB [I-1057 ( ) CODE 6707]</b>		<b>998 LIN.FT.</b>
E. 24 St. North Return at Chester	=	112 Lin.Ft.
E. 24 St. Chester South	=	304 " "
E. 30 St. Chester North	=	76 " "
E. 30 St. Chester South	=	256 " "
Chester Ave. (See "Removal for Reuse" Calculation) 1936-774	=	1162 " "
Summary of Extra Area Quantities		Sheet No 11 = 70 " "
<b>TOTAL E-8 REMOVAL AND DISPOSAL OF EXIST. CURB [U-234 ( ) CODE 6707]</b>		<b>1980 LIN.FT.</b>

## E-8 REMOVAL FOR REUSE OF EXISTING CURB

Superior Ave. (Total Length of Exist. Curb)	=	590 Lin.Ft.
Payne Ave. " " " "	=	570 " "
Stuber Ct. " " " "	=	498 " "
Estimated 40% in Salvagable Condition	=	1658 Lin.Ft × 0.40 = 663 Lin.Ft.
Summary of Extra Area Quantities		Sheet No 11 = 153 " "
<b>TOTAL E-8 REMOVAL FOR REUSE OF EXISTING CURB [I-1057 ( ) CODE 722]</b>		<b>816 LIN.FT.</b>
Chester Ave. Sta. 1+61.18 to Sta. 12+05.44	=	1663 Lin.Ft. × 0.40 = 665 Lin.Ft.
<b>TOTAL E-8 REMOVAL FOR REUSE OF EXISTING CURB [I-1057 ( ) CODE 6707]</b>		<b>665 LIN.FT.</b>
Chester Ave. {Sta. 0-664.14 to Sta. 1+61.18}	=	1936 Lin.Ft × 0.40 = 774 Lin.Ft.
{Sta. 12+05.44 to Sta. 16+55.85}		
Summary of Extra Area Quantities		Sheet No 11 = 168 " "
<b>TOTAL E-8 REMOVAL FOR REUSE OF EXISTING CURB [U-234 ( ) CODE 6707]</b>		<b>942 LIN.FT.</b>
I-11 SANDSTONE CURB RESET [I-1057 ( ) CODE 722]	=	816 - (816 × 0.10) = 734 LIN.FT.
I-11 SANDSTONE CURB RESET [I-1057 ( ) CODE 6707]	=	665 - (665 × 0.10) = 598 LIN.FT.
I-11 SANDSTONE CURB RESET [U-234 ( ) CODE 6707]	=	942 - (942 × 0.10) = 848 LIN.FT.

# CALCULATIONS

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## I-II 6"x18" SANDSTONE CURB, 1" RADIUS BULLNOSE

Innerbelt (Median)	Sta. 25+00 to Sta. 27+09.87	= 209.87 Lin.Ft. x 2	= 419.74 Lin.Ft.
" " "	Sta. 26+61.13 to Sta. 51+00	= 738.87 " " x 2	= 1477.74 " "
Superior Ave.(North Side)	Sta. 0+75 to Sta. 1+68	= 93.00 " "	= 93.00 " "
" " (South Side)	Sta. 0+40 to Sta. 1+48	= 108.00 " "	= 108.00 " "
" " " "	Sta. 3+77 to Sta. 4+06.98	= 29.98 " "	= 29.98 " "
" " " "	Sta. 4+74.63 to Sta. 5+48	= 73.37 " "	= 73.37 " "
Payne Ave. (North Side)	Sta. 3+69 to Sta. 5+11.29	= 142.29 " "	= 142.29 " "
" " " "	Sta. 7+35.81 to Sta. 9+30	= 194.19 " "	= 194.19 " "
" " (South Side)	Sta. 4+50 to Sta. 5+11.29	= 61.29 " "	= 61.29 " "
" " " "	Sta. 7+35.81 to Sta. 8+00	= 64.19 " "	= 64.19 " "
E. 27 St. Relocation	Sta. 0-30 to Sta. 0+00	= 30.00 Lin.Ft. x 2	= 60.00 " "
" " " "	Sta. 0+00 to Sta. 0+80.13	(Left Side)	= 105.27 " "
" " " "	Sta. 0+80.13 to Sta. 3+47.53	= (267.40x2)-42.00	= 492.88 " "
E. 24 St.	Sta. 0+60.23 to Sta. 2+02	= 141.77 Lin.Ft. x 2	= 283.54 " "
Summary of Driveway Quantities		Sheet No 13	= 156.00 " "
Summary of Extra Area Quantities - Straight Curb		Sheet No 11	= 1504.23 " "
" " " " " - 10' Radius		= 84.72 Lin.Ft.	
" " " " " - 15' " "		= 95.43 " "	
" " " " " - 20' " "		= 62.83 " "	
" " " " " - 25' " "		= 78.54 " "	
" " " " " - 28' " "		= 128.83 " "	
" " " " " - 40' " "		= 193.05 " "	
" " " " " - 50' " "		= 74.59 " "	
" " " " " - 52' " "		= 160.39 " "	
" " " " " - 55' " "		= 239.04 " "	
E. 27 St. Relocation (Curve #2) - 35' " "		= 54.99 " "	
TOTAL RADIAL CURB		= 1172.41 Lin.Ft.	= 1172.41 Lin.Ft.
Summary of Extra Area Quantities - 1.5' Radius Bumper Block		= 48.60 " "	= 48.60 " "
Curb Inlet Deduction: 2@7' & 6@2' = 26 Lin.Ft.			
Curb to be Reset - Sheet No 16 = 734 " "		Gross Total	= 6486.64 Lin.Ft.
Total Deductions = 760 Lin.Ft.			= 760.00 " "
TOTAL I-II 6"x18" S.S. CURB, 1" RADIUS BULLNOSE [I-1057( ) CODE 722]			= 5726.64 LIN.FT.
Chester Ave (North Side) Sta. 2+35.00 to Sta. 3+25.42		= 90.42 Lin.Ft.	= 90.42 Lin.Ft.
" " " " Sta. 3+25.42 to Sta. 6+26.21	= 300.79 Lin.Ft. x 2	= 601.58 " "	= 601.58 " "
" " " " Sta. 7+65.73 to Sta. 8+09.07	= 43.34 " " x 2	= 86.68 " "	= 86.68 " "
" " " " Sta. 8+09.07 to Sta. 9+50.74		= 141.67 " "	= 141.67 " "
" " " " Sta. 9+50.74 to Sta. 12+05.44	= 254.70 " " x 2	= 509.40 " "	= 509.40 " "
" " (South Side) Sta. 1+61.18 to Sta. 6+26.21	= 465.03 " " x 2	= 930.06 " "	= 930.06 " "
" " " " Sta. 7+65.73 to Sta. 9+60.64	= 194.91 " " x 2	= 389.82 " "	= 389.82 " "
" " " " Sta. 9+60.64 to Sta. 10+30.43		= 69.79 " "	= 69.79 " "
" " " " Sta. 10+84.47 to Sta. 11+38.79		= 54.32 " "	= 54.32 " "
Summary of Extra Area Quantities - Straight Curb		Sheet No 11	= 340.71 " "
Curb Inlet Deduction: 6@2' = 12 Lin.Ft.			
Curb to be Reset - Sheet No 16 = 598 " "		Gross Total	= 3214.45 Lin.Ft.
Total Deductions = 610 Lin.Ft.			= 610.00 " "
TOTAL I-II 6"x18" S.S. CURB, 1" RADIUS BULLNOSE [I-1057( ) CODE 6707]			= 2604.45 LIN.FT.

## I-II 6"x18" SANDSTONE CURB, 1" RADIUS BULLNOSE

Chester Ave.(North Side) Sta. 0-279.63 to Sta. 0-185.89	= 93.74 Lin. Ft.
" " " " Sta. 0-145.77 to Sta. 0-49.74	= 96.03 " "
" " " " Sta. 0+69.28 to Sta. 0+71.74	= 2.46 " "
" " " " Sta. 12+05.44 to Sta. 12+95.57 = 90.13 Lin.Ft. x 2	= 180.26 " "
" " " " Sta. 0-307.42 to Sta. 0-35 (Median)	= 272.42 " "
" " (South Side) Sta. 0-307.42 to Sta. 0-59.28	= 248.14 " "
" " " " Sta. 0+53 to Sta. 1+61.18 (Median)	= 108.18 " "
" " " " Sta. 0+59.28 to Sta. 1+61.18	= 101.90 " "
" " " " Sta. 12+05.44 to Sta. 12+95.57	= 90.13 " "
Summary of Extra Area Quantities - Straight Curb	Sheet No 11
" " " " " - 13' Radius	= 81.74 Lin.Ft.
" " " " " - 25' " "	= 232.97 " "
" " " " " - 35' " "	= 54.86 " "
" " " " " - 40' " "	= 307.06 " "
TOTAL RADIAL CURB	= 676.63 Lin.Ft.
Summary of Extra Area Quantities - 2.5' Radius Bumper Block	Sheet No 11
Curb Inlet Deduction: 13@2' = 26 Lin.Ft.	
Curb to be Reset - Sheet No 16 = 848 " "	Gross Total
Total Deductions = 874 Lin.Ft.	= 461.96 " "
TOTAL I-II 6"x18" S.S. CURB, 1" RADIUS BULLNOSE [U-234( ) CODE 6707]	= 4601.67 Lin.Ft.
	= 874.00 " "
	= 3727.67 LIN.FT.

## I-II 6"x18" SANDSTONE CURB, 3" RADIUS BULLNOSE

Ramp No 9	Sta. 2+23.97 to Sta. 8+62.09	= 638.12 Lin. Ft.
Ramp No 10	Sta. 1+23.60 to Sta. 5+09.06	= 395.49 " "
" " (Chester Conn.)	Sta. 6+36.94 to Sta. 8+14.26	= 189.83 " "
Ramp No 11	Sta. 2+55.94 to Sta. 8+18	= 578.75 " "
Ramp No 12	Sta. 2+72.52 to Sta. 4+06.29	= 133.77 " "
" " (E.30 St. Conn.)	Sta. 5+27.03 to Sta. 7+19	= 191.97 " "
" " (E.30 St. Conn.)	Sta. 5+53.18 to Sta. 7+79	= 229.96 " "
Ramp No 13	Sta. 1+63.71 to Sta. 5+31.43	= 368.84 " "
Summary of Extra Area Quantities - Straight Curb	Sheet No 11	= 1778.03 " "
Gross Total		= 4504.76 Lin.Ft.
Curb Inlet Deduction: 1@7'		= 7.00 " "
TOTAL I-II 6"x18" S.S. CURB, 3" RADIUS BULLNOSE [I-1057( ) CODE 722]		= 4497.76 LIN.FT.

TOTAL I-II 6"x18" S.S. CURB REQUIRED [I-1057( ) CODE 722] = 5726.64 + 4497.76 = 10,224.40 LIN.FT. ←

## E-101 COMPACTED SUBGRADE

Total T-71 9" Reinf. Concrete Pavement	= 35,286 Sq.Yd.
Total I-7 Reinf. Concrete Approach Slabs	= 1,122 " "
Total B-70 9" Concrete Base Course (Less B-70 from Storm Sewer Table)	= 3,325 " "
Total B-33 3" Bitum. Macadam (Paved Berms)	= 10,002 " "
TOTAL E-101 COMPACTED SUBGRADE [I-1057( ) CODE 722]	= 49,735 SQ.YD. ✓
TOTAL E-101 COMPACTED SUBGRADE [I-1057( ) CODE 6707] = Total B-70	= 7,279 SQ.YD. ✓
TOTAL E-101 COMPACTED SUBGRADE [U-234( ) CODE 6707] = Total B-70	= 12,196 SQ.YD. ✓

CALCULATIONS CONTINUED SHEET NO 11

CALCULATIONS

# GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	18 124
2	OHIO		

CUY-42-19.28  
 CUY-322-(1.08-1.39)  
 CUYAHOGA COUNTY

## ROADWAY

ITEM No	INTERSTATE I-1057(8)			GRAND TOTALS	UNIT	DESCRIPTION
	U-234(2) CODE 6707	CODE 6707	CODE 7221			
E-101	7331	5,777	507,451	520,559	Cu.Yds.	Roadway Excavation, as per Plan
E-101	12,196	7,279	50,353	69,828	Sq.Yds.	Compacted Subgrade
E-8	10,332	7,308	16,820	34,460	Sq.Yds.	Removal and Disposal of Existing Pavement
E-8	17,189	11,524	47,185	75,898	Sq. Ft.	Removal and Disposal of Existing Sidewalk
E-8	1,980	998	6,471	9,449	Lin. Ft.	Removal and Disposal of Existing Curb
E-8			1,480	1,480	Sq.Yds.	Removal and Disposal of Existing Wearing Course.
E-8	942	665	816	2,423	Lin. Ft.	Removal for Reuse of Existing Curb
T-10	150		150	300	Cu.Yds.	Traffic Compacted Surface Course for Maintaining Traffic
E-11	19	11	138	168	M.Gals.	Water
M-10	3		3	6	Tons	Furnishing and Applying calcium chloride for Maintaining Traffic
I-8	1			1	Each	Monument Box, Type "A", as per Plan
I-8	2	2		4	Each	Monument Boxes, Type "B", as per Plan
I-8			2	2	Each	Monument Box Assemblies, Type "A", as per Plan.
I-8	1			1	Each	Monument Box Assembly, Type "B", as per Plan
T-35	50		100	150	Cu.Yds.	Asphaltic Concrete Surface Course or an Approved Bituminous Premixed Surface Course for
I-13	14,197	6,968	10,362	31,527	Sq.Ft.	4" Concrete Sidewalk Maintaining Traffic
I-15			1,400	1,400	Lin. Ft.	Guard Rail, Steel Beam Standard Type (Deep), as per Standard Drawing I-15 No. 2-A, as per plan
I-15			1,350	1,350	Lin. Ft.	Guard Rail, Steel Beam Standard Type (Deep) using steel posts, as per Std. Drawing I-15 No. 2-B, as per plan
I-15			2,212.5	2,212.5	Lin. Ft.	Guard Rail, Steel Beam Barrier Type (Deep), as per Standard Drawing I-15 No. 2-B
S-22	Lump Sum	Lump Sum		Lump Sum	Lump Sum	Removal of Portions of Existing Structures
L-9	4,432	4,204	84,759	93,395	Sq.Yds	Seeding and Protecting, as per Plan
L-9	0.40	0.38	7.63	8.41	Tons	Commercial Fertilizer (10-6-4)
L-9	2.00	1.89	38.14	42.03	Tons	Agricultural Liming Materials
<b>LIGHTING</b>						
S-25			5,621	5,621	Lin. Ft.	Street Lighting Conduit, (1-2" Duct), as per Plan
S-25			225	225	Lin. Ft.	Street Lighting Conduit, (1-4" Duct), as per Plan
S-25			1,149	1,149	Lin. Ft.	Street Lighting Conduit, (2-2" Ducts), as per Plan
S-25			34	34	Lin. Ft.	Street Lighting Conduit, (2-4" Ducts), as per Plan
S-25			1,846	1,846	Lin. Ft.	Street Lighting Conduit, (1-2" & 1-4" Duct), as per Plan
S-25			274	274	Lin. Ft.	Street Lighting Conduit, (2-2" & 1-4" Duct), as per Plan
S-25			63	63	Lin. Ft.	Street Lighting Conduit (2-2" & 2-4" Duct), as per Plan
S-25			47	47	Each	Pull Boxes - Regular, as per Plan
S-25			5	5	Each	Double Pull Boxes, as per Plan
S-25			51	51	Each	Special Pull Boxes, as per Plan
S-25			37	37	Each	Foundations - Regular, as per Plan
S-25			47	47	Each	Foundations - Special, as per Plan
S-25			10	10	Each	Lamp Standards With 2-10 Foot Brackets, Type "W", as per Plan.
S-25			27	27	Each	Lamp Standards With 1-10 Foot Bracket, Type "X", as per Plan
S-25			47	47	Each	Lamp Standards With 1-17 Foot Bracket, Type "Y", as per Plan
I-9			445	445	Lin. Ft.	Stone Underdrains, No. 2, as per plan.

## PAVEMENT

ITEM No	INTERSTATE I-1057(8)			GRAND TOTALS	UNIT	DESCRIPTION
	U-234(2) CODE 6707	CODE 6707	CODE 7221			
B-33			10,002	10,002	Sq. Yds.	3" Bituminous Macadam Base Course,
B-35	508	420	247	1,175	Cu. Yds.	Asphaltic Concrete Leveling Course (60-70)
B-35			30	30	Lin. Ft.	Sealing Vertical face of Existing Pavement.
B-70	12,196	7,279	3,943	23,418	Sq. Yds.	9" Portland Cement Concrete Base Course.
T-30		593	3,501	4,094	Gals.	Bituminous Prime Coat: Sec. M-5.7, RT-2 or RT-3, or Sec. M-5.3, MC-0 or MC-1
T-30	1,220	728	706	2,654	Gals.	Bituminous Tack Coat: Sec. M-5.5, MS-2 or RS-1; or Sec. M-5.2, RC-1 or RC-2 as per Sec. T-30.02
T-31			5,001	5,001	Gals.	Bituminous Surface Treatment - Bituminous Material, as per Plan
T-31			80	80	Cu. Yds.	Bituminous Surface Treatment - No. 6 Aggregate
T-31			80	80	Cu. Yds.	Bituminous Surface Treatment - No. 46 Aggregate
T-35	508	398	310	1,216	Cu. Yds.	Asphaltic Concrete Surface Course, Type "C" (60-70)
T-70	288	192	170	650	Sq. Yds.	8" Portland Cement Concrete Pavement
T-70	139	521	120	780	Sq. Yds.	9" Portland Cement Concrete Pavement
T-71			35,286	35,286	Sq. Yds.	9" Reinforced Portland Cement Concrete Pavement
I-7			1,122	1,122	Sq. Yds.	Reinforced Concrete Approach Slabs (T=13")
I-11	3,728	2,604	10,224	16,556	Lin. Ft.	6"x18" Sandstone Curb, as per Plan
I-11	848	598	734	2,180	Lin. Ft.	Sandstone Curb Reset, as per Plan
I-18		329	1,358	1,687	Cu. Yds.	Stabilized Crushed Aggregate Shoulders and Approaches, as per Plan
I-21	226	15	2,649	2,890	Sq. Yds.	Portland Cement Concrete Median Pavement, 4" Standard Type 1 as per Plan
I-22	2,169	1,216	18,010	21,395	Cu. Yds.	Subbase
	Lump Sum	Lump Sum	Lump Sum	Lump Sum		Construction Layout Stakes
<b>STRUCTURES OVER 20 FT. SPAN</b>						
CUY-42-1932 For Quantities See Sheet No. 108						
CUY-42-1952 " " " " " 110						
CUY-42-1971 " " " " " 117						

# GENERAL SUMMARY

## DRAINAGE

ITEM NO	U-234(2)		INTERSTATE I-1057 (8)		GRAND TOTALS	UNIT	DESCRIPTION
	CODE 6707	CODE 6707	CODE 7221	CODE 7221			
I-2			60		60	Lin. Ft.	12" Class "A" Storm Sewers
I-2			1479		1479	Lin. Ft.	12" Class "A" Storm Sewers Under Pavement or Approaches, Sec. M-6.5(b), or M-6.8(b)
I-2			241		241	Lin. Ft.	15" Class "A" Storm Sewers Under Pavement or Approaches, Sec. M-6.5(b), or M-6.8(b)
I-2			90		90	Lin. Ft.	18" Class "A" Storm Sewers Under Pavement or Approaches, Sec. M-6.5(b), or M-6.8(b)
I-2			228		228	Lin. Ft.	15" Class "B" Storm Sewers
I-2	468	260	364		1092	Lin. Ft.	12" Class "B" Storm Sewers Under Pavement or Approaches
I-2			216		216	Lin. Ft.	15" Class "B" Storm Sewers Under Pavement or Approaches
I-2			66		66	Lin. Ft.	18" Class "B" Storm Sewers Under Pavement or Approaches
I-2			1813		1813	Lin. Ft.	42" Class "B" Storm Sewers Under Pavement or Approaches
I-2			811		811	Lin. Ft.	48" Class "B" Storm Sewers Under Pavement or Approaches
I-2			582		582	Lin. Ft.	8" Storm Sewers Sec. M-6.4 (c), as per plan.
I-2			312		312	Lin. Ft.	12" Storm Sewers Under Pavement or Approaches Sec. M-6.4 (a)
I-2			119		119	Lin. Ft.	12" Storm Sewers Under Pavement or Approaches Sec. M-6.8 (b)
I-2			221		221	Lin. Ft.	15" Storm Sewers Under Pavement or Approaches Sec. M-6.8 (b)
I-2		246	246		246	Lin. Ft.	18" Storm Sewers Under Pavement or Approaches Sec. M-6.8 (b)
I-2			420		420	Lin. Ft.	21" Storm Sewers Under Pavement or Approaches Sec. M-6.8 (b)
I-2		317	364		681	Lin. Ft.	24" Storm Sewers Under Pavement or Approaches Sec. M-6.8 (b)
I-4			4361		4361	Lin. Ft.	6" Curb Underdrains (Deep), as per Plan
I-4	2382	3038	2182		7,602	Lin. Ft.	6" Curb Underdrains (Shallow), as per Plan
I-4			8784		8,784	Lin. Ft.	6" Underdrains (Deep), as per Plan
I-4			50		50	Lin. Ft.	6" Underdrains (Shallow), as per Plan
I-4	180	34	453		667	Lin. Ft.	6" Outlets for Underdrains, Sec. M-6.4 (h) Without Perforations
I-4			2600		2600	Lin. Ft.	6" Underdrains, Intercepting Sec. M-6.4 (h) as per Plan
I-5			9		9	Each	6" Pipe Specials for Underdrains, Sec. M-6.4 (h) Without Perforations
I-5	3	6	17		26	Each	6" Pipe Specials for Underdrains
I-5			12		12	Each	8" Pipe Specials for Storm Sewers, Sec. M-6.4 (c)
I-5			1		1	Each	12" Pipe Special for Storm Sewers, Sec. M-6.4 (a)
I-5			21		21	Each	12" Class "A" Pipe Specials for Storm Sewers Under Pavement or Approaches, Sec. M-6.5(b), or M-6.8(b)
I-5	1	2			3	Each	12" Class "B" Pipe Specials for Storm Sewers Under Pavement or Approaches
I-5			1		1	Each	15" Class "A" Pipe Special for Storm Sewers Under Pavement or Approaches, Sec. M-6.5(b), or M-6.8(b)
I-5			1		1	Each	15" Class "B" Pipe Special for Storm Sewers Under Pavement or Approaches

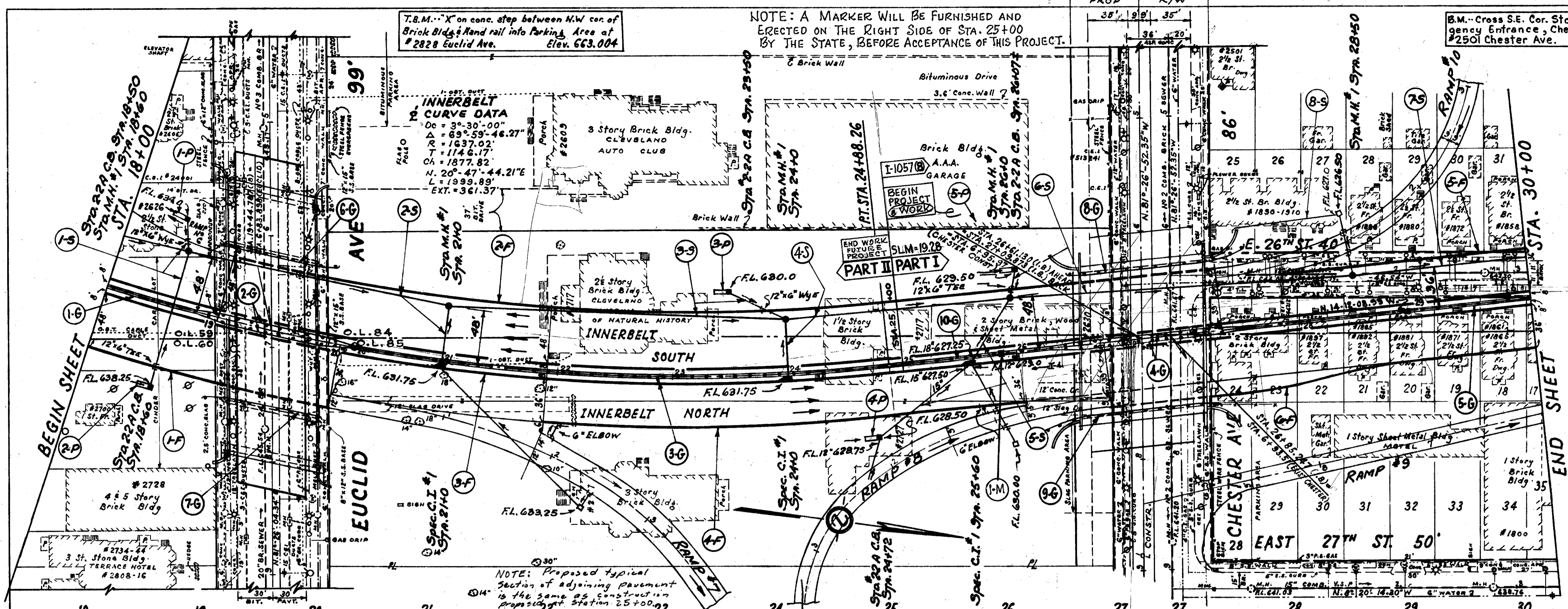
## DRAINAGE

ITEM NO	U-234(2)		INTERSTATE I-1057 (8)		GRAND TOTALS	UNIT	DESCRIPTION
	CODE 6707	CODE 6707	CODE 7221	CODE 7221			
I-8	2		1	21	24	Each	Standard Manholes #1 With Special Frame and Cover, as per Plan
I-8			2	1	3	Each	Standard Manholes #2 With Special Frame and Cover, as per Plan
I-8				4	4	Each	Standard Manholes #2 With Special Frame and Cover, as per Plan, Without Drop Pipes
I-8				28	28	Each	Standard Catch Basins # 2-2A
I-8	1		2		3	Each	Standard Catch Basins #2-2A, Modified as per Plan.
I-8				3	3	Each	Special Curb Inlets #1, as per Plan
I-8	2			6	8	Each	Special Curb Inlets #4, as per Plan
I-8	2		3	1	6	Each	Special Curb Inlets #4 With Salvaged Casting, as per Plan.
I-8				2	2	Each	Special Catch Basins #4, as per Plan
I-8	5		1	3	9	Each	Special Catch Basins #4 With Salvaged Casting, as per Plan
I-8	4		1	4	9	Each	Catch Basins Adjusted to Grade
I-8	4		3	4	11	Each	Manholes Adjusted to Grade
I-14				494	494	Lin. Ft.	Standard Paved Gutter, Type 1, Modified as per Plan
I-14				330	330	Lin. Ft.	Special Paved Gutter, as per Plan
I-16	10		7	14	31	Each	Catch Basins Abandoned.

T.B.M. "X" on conc. step between N.W. cor. of Brick Bldg. and rail into Parking Area at #2828 Euclid Ave. Elev. 663.004

NOTE: A MARKER WILL BE FURNISHED AND ERECTED ON THE RIGHT SIDE OF STA. 25+00 BY THE STATE, BEFORE ACCEPTANCE OF THIS PROJECT.

T.B.M. Cross S.E. Cor. Stone Step Emergency Entrance, Chester Ave Clinic #2501 Chester Ave. Elev. 655.933

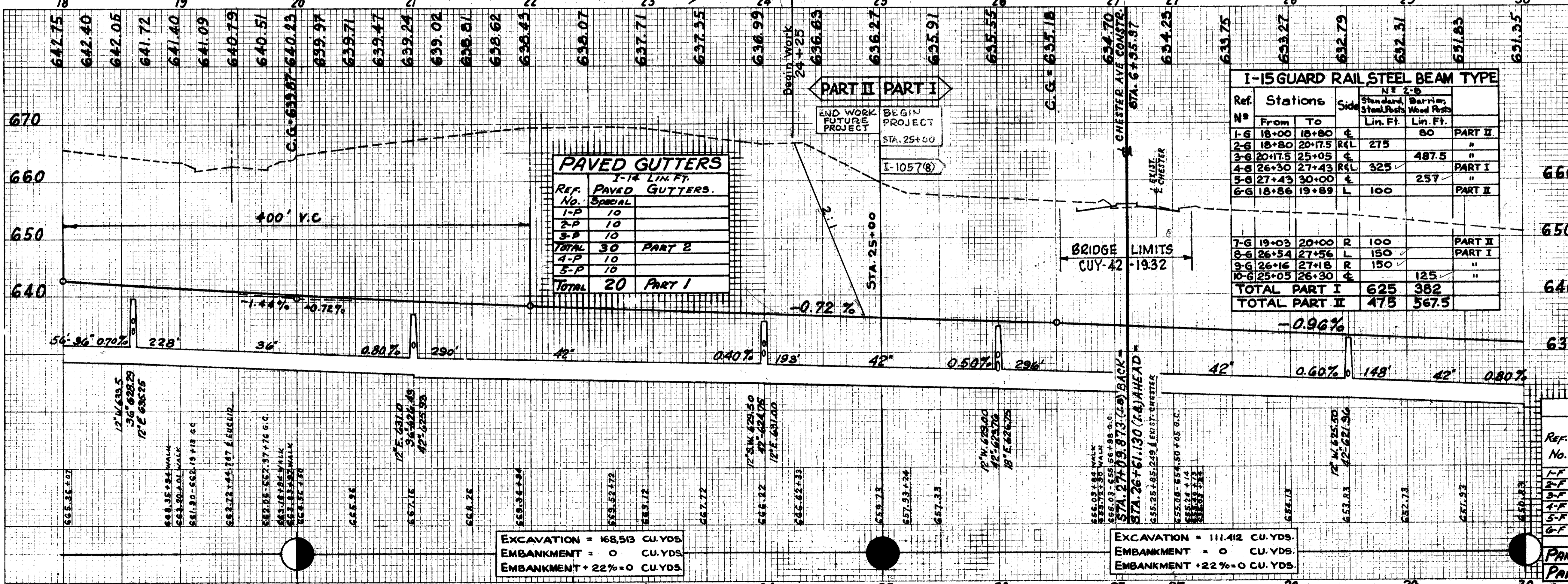


MONUMENT BOXES

Item No	Station	MONUMENT BOX ASSEMBLY TYPE	
		A	B
I-M	26+00	1	
<b>TOTAL</b>		<b>1</b>	

STORM SEWERS

STATION	FROM	TO	SIDE	REF. NO.	CLASSIFICATION		TOTAL
					I-2	I-3	
18+00	18+00	18+10	R	1	1	2	
18+10	18+10	18+20	R	1	1	2	
18+20	18+20	18+30	R	1	1	2	
18+30	18+30	18+40	R	1	1	2	
18+40	18+40	18+50	R	1	1	2	
18+50	18+50	18+60	R	1	1	2	
18+60	18+60	18+70	R	1	1	2	
18+70	18+70	18+80	R	1	1	2	
18+80	18+80	18+90	R	1	1	2	
18+90	18+90	19+00	R	1	1	2	
19+00	19+00	19+10	R	1	1	2	
19+10	19+10	19+20	R	1	1	2	
19+20	19+20	19+30	R	1	1	2	
19+30	19+30	19+40	R	1	1	2	
19+40	19+40	19+50	R	1	1	2	
19+50	19+50	19+60	R	1	1	2	
19+60	19+60	19+70	R	1	1	2	
19+70	19+70	19+80	R	1	1	2	
19+80	19+80	19+90	R	1	1	2	
19+90	19+90	20+00	R	1	1	2	
20+00	20+00	20+10	R	1	1	2	
20+10	20+10	20+20	R	1	1	2	
20+20	20+20	20+30	R	1	1	2	
20+30	20+30	20+40	R	1	1	2	
20+40	20+40	20+50	R	1	1	2	
20+50	20+50	20+60	R	1	1	2	
20+60	20+60	20+70	R	1	1	2	
20+70	20+70	20+80	R	1	1	2	
20+80	20+80	20+90	R	1	1	2	
20+90	20+90	21+00	R	1	1	2	
21+00	21+00	21+10	R	1	1	2	
21+10	21+10	21+20	R	1	1	2	
21+20	21+20	21+30	R	1	1	2	
21+30	21+30	21+40	R	1	1	2	
21+40	21+40	21+50	R	1	1	2	
21+50	21+50	21+60	R	1	1	2	
21+60	21+60	21+70	R	1	1	2	
21+70	21+70	21+80	R	1	1	2	
21+80	21+80	21+90	R	1	1	2	
21+90	21+90	22+00	R	1	1	2	
22+00	22+00	22+10	R	1	1	2	
22+10	22+10	22+20	R	1	1	2	
22+20	22+20	22+30	R	1	1	2	
22+30	22+30	22+40	R	1	1	2	
22+40	22+40	22+50	R	1	1	2	
22+50	22+50	22+60	R	1	1	2	
22+60	22+60	22+70	R	1	1	2	
22+70	22+70	22+80	R	1	1	2	
22+80	22+80	22+90	R	1	1	2	
22+90	22+90	23+00	R	1	1	2	
23+00	23+00	23+10	R	1	1	2	
23+10	23+10	23+20	R	1	1	2	
23+20	23+20	23+30	R	1	1	2	
23+30	23+30	23+40	R	1	1	2	
23+40	23+40	23+50	R	1	1	2	
23+50	23+50	23+60	R	1	1	2	
23+60	23+60	23+70	R	1	1	2	
23+70	23+70	23+80	R	1	1	2	
23+80	23+80	23+90	R	1	1	2	
23+90	23+90	24+00	R	1	1	2	
24+00	24+00	24+10	R	1	1	2	
24+10	24+10	24+20	R	1	1	2	
24+20	24+20	24+30	R	1	1	2	
24+30	24+30	24+40	R	1	1	2	
24+40	24+40	24+50	R	1	1	2	
24+50	24+50	24+60	R	1	1	2	
24+60	24+60	24+70	R	1	1	2	
24+70	24+70	24+80	R	1	1	2	
24+80	24+80	24+90	R	1	1	2	
24+90	24+90	25+00	R	1	1	2	
25+00	25+00	25+10	R	1	1	2	
25+10	25+10	25+20	R	1	1	2	
25+20	25+20	25+30	R	1	1	2	
25+30	25+30	25+40	R	1	1	2	
25+40	25+40	25+50	R	1	1	2	
25+50	25+50	25+60	R	1	1	2	
25+60	25+60	25+70	R	1	1	2	
25+70	25+70	25+80	R	1	1	2	
25+80	25+80	25+90	R	1	1	2	
25+90	25+90	26+00	R	1	1	2	
26+00	26+00	26+10	R	1	1	2	
26+10	26+10	26+20	R	1	1	2	
26+20	26+20	26+30	R	1	1	2	
26+30	26+30	26+40	R	1	1	2	
26+40	26+40	26+50	R	1	1	2	
26+50	26+50	26+60	R	1	1	2	
26+60	26+60	26+70	R	1	1	2	
26+70	26+70	26+80	R	1	1	2	
26+80	26+80	26+90	R	1	1	2	
26+90	26+90	27+00	R	1	1	2	
27+00	27+00	27+10	R	1	1	2	
27+10	27+10	27+20	R	1	1	2	
27+20	27+20	27+30	R	1	1	2	
27+30	27+30	27+40	R	1	1	2	
27+40	27+40	27+50	R	1	1	2	
27+50	27+50	27+60	R	1	1	2	
27+60	27+60	27+70	R	1	1	2	
27+70	27+70	27+80	R	1	1	2	
27+80	27+80	27+90	R	1	1	2	
27+90	27+90	28+00	R	1	1	2	
28+00	28+00	28+10	R	1	1	2	
28+10	28+10	28+20	R	1	1	2	
28+20	28+20	28+30	R	1	1	2	
28+30	28+30	28+40	R	1	1	2	
28+40	28+40	28+50	R	1	1	2	
28+50	28+50	28+60	R	1	1	2	
28+60	28+60	28+70	R	1	1	2	
28+70	28+70	28+80	R	1	1	2	
28+80	28+80	28+90	R	1	1	2	
28+90	28+90	29+00	R	1	1	2	
29+00	29+00	29+10	R	1	1	2	
29+10	29+10	29+20	R	1	1	2	
29+20	29+20	29+30	R	1	1	2	
29+30	29+30	29+40	R	1	1	2	
29+40	29+40	29+50	R	1	1	2	
29+50	29+50	29+60	R	1	1	2	
29+60	29+60	29+70	R	1	1	2	
29+70	29+70	29+80	R	1	1	2	
29+80	29+80	29+90	R	1	1	2	
29+90	29+90	30+00	R	1	1	2	
<b>PART I-TOTALS</b>						<b>1093</b>	<b>796</b>
<b>PART II-TOTALS</b>						<b>20</b>	<b>901</b>



PAVED GUTTERS

REF. NO.	PAVED GUTTERS	PART
1-P	10	
2-P	10	
3-P	10	
<b>TOTAL</b>	<b>30</b>	<b>PART 2</b>
4-P	10	
5-P	10	
<b>TOTAL</b>	<b>20</b>	<b>PART 1</b>

I-15 GUARD RAIL, STEEL BEAM TYPE

Ref. No.	Stations	Side	Standard Steel Posts	Barrier Wood Posts	Notes
1-G	18+00	R	15	80	PART II
2-G	18+80	R	275	80	PART II
3-G	20+17.5	R	487.5		PART II
4-G	26+30	R	325	487.5	PART I
5-G	27+43	R	30	257	PART I
6-G	18+86	L	100		PART II
7-G	19+03	R	100		PART II
8-G	26+54	R	150		PART I
9-G	26+16	R	150		PART I
10-G	25+03	R		125	
<b>TOTAL PART I</b>			<b>625</b>	<b>382</b>	
<b>TOTAL PART II</b>			<b>475</b>	<b>567.5</b>	

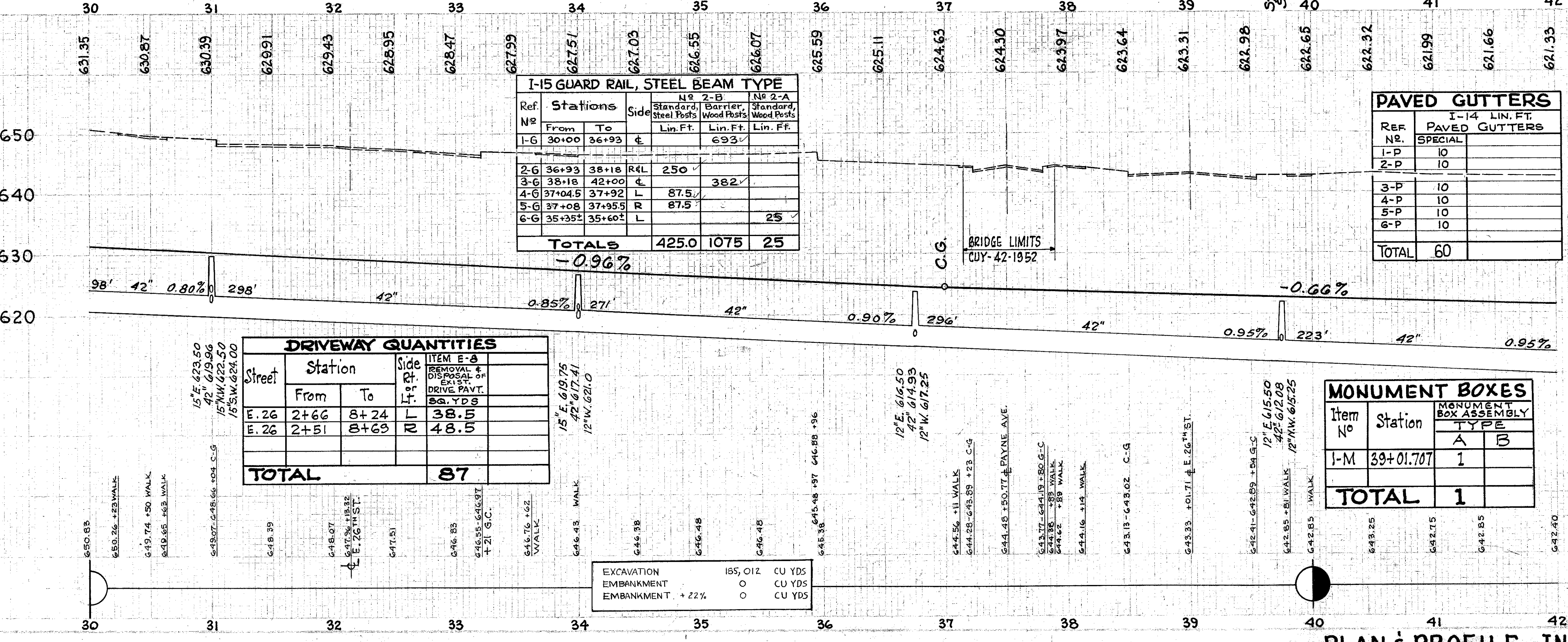
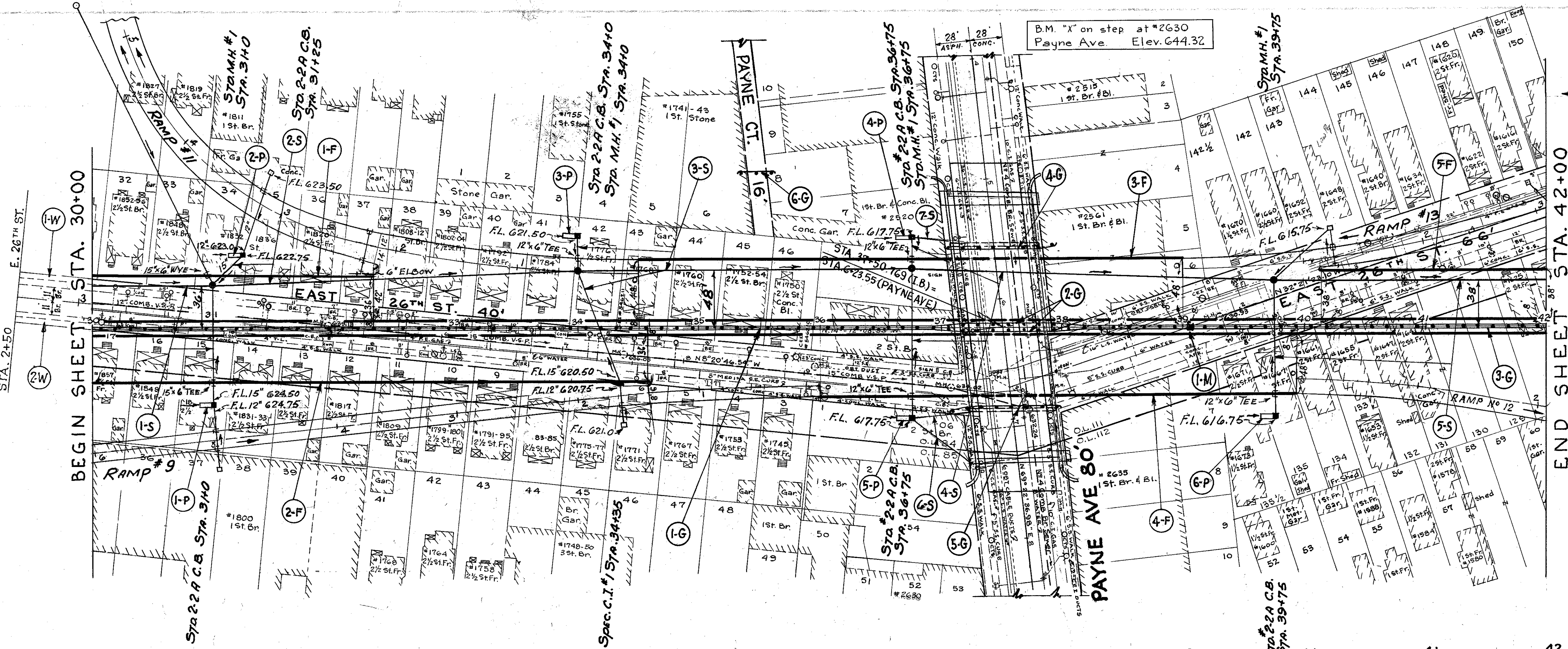
6" UNDERDRAINS

Ref. No.	STATION	SIDE	RT CURB 5'-0" DEEP	5'-0" DEEP	SHAL-LOW	6" PIPE SPECIALS ELBOW
1-F	18+10	RT		216		
2-F	19+10	LT		856		
3-F	18+10	RT			840	
4-F	22+10	RT		364		2
5-F	27+30	LT	30	190		
6-F	26+75	RT		374		
<b>PART 2-TOTALS</b>				<b>1093</b>	<b>796</b>	<b>1</b>
<b>PART 1-TOTALS</b>				<b>20</b>	<b>901</b>	<b>1</b>

EXCAVATION = 168,513 CU. YDS.  
 EMBANKMENT = 0 CU. YDS.  
 EMBANKMENT + 22% = 0 CU. YDS.

EXCAVATION = 111,412 CU. YDS.  
 EMBANKMENT = 0 CU. YDS.  
 EMBANKMENT + 22% = 0 CU. YDS.

PLAN & PROFILE: INNERBELT - STA. 18+00 to STA. 30+00



Street	Station	Side	ITEM E-8 REMOVAL & DISPOSAL OF EXIST. DRIVE PAVT. SQ. YDS
E. 26	2+66	8+24	38.5
E. 26	2+51	8+69	48.5
<b>TOTAL</b>			<b>87</b>

Ref. No	Stations		Side	No. 2-A		
	From	To		Standard Steel Posts	Barrier Wood Posts	Standard Wood Posts
1-G	30+00	36+93	£	693		
2-G	36+93	38+18	R&L	250		
3-G	38+18	42+00	£		382	
4-G	37+04.5	37+92	L	87.5		
5-G	37+08	37+95.5	R	87.5		
6-G	35+35	35+60	L		25	
<b>TOTALS</b>				<b>425.0</b>	<b>1075</b>	<b>25</b>

REF. NO.	CLASS.	I-14 LIN. FT.	
		PAVED GUTTERS	SPECIAL
1-P	10		
2-P	10		
3-P	10		
4-P	10		
5-P	10		
6-P	10		
<b>TOTAL</b>		<b>60</b>	

Item No	Station	MONUMENT BOX ASSEMBLY TYPE	
		A	B
1-M	39+01.707	1	
<b>TOTAL</b>		<b>1</b>	

REF. NO.	STATION	SIDE	I-4 LIN. FT.		OUTLETS FOR UNDERDRAINS	I-5 EACH 6" PIPE SPECIALS ELBOW
			CURB 5'-0" DEEP	5'-0" DEEP		
1-F	30+0	R&L	218			
2-F	30+0	R&L	244			
3-F	34+50	R&L	448			
4-F	36+0	R&L	390			
5-F	40+14	R&L	116			
<b>TOTALS</b>			<b>286</b>	<b>1702</b>	<b>6</b>	<b>1</b>

REF. NO.	CLASS.	SIDE	STATION	I-8 EACH		TOTALS
				UNDER PAVT.	PAVED GUTTERS	
1-S	30+0	R&L	98			
2-S	31+0	R&L	298			
3-S	34+0	R&L	32			
4-S	36+15	R&L	22			
5-S	39+15	R&L	106			
<b>TOTALS</b>				<b>264</b>	<b>127</b>	<b>98</b>

Station	Side	ITEM E-8		TOTAL
		REMOVAL & DISPOSAL OF EXIST. WALK	SG. FT.	
1-W	2+50	8+75	L	2548
2-W	2+50	8+75	R	2563
<b>TOTAL</b>				<b>5111</b>

BRIDGE DRAINS.  
 REF # 6-S I-2 8' BIT. C.M.P. M-64(C) 116 LIM.FT.  
 REF # 7-S I-2 8' BIT. C.M.P. M-64(C) 30 LIM.FT.  
 REF # 7-S I-2 8' BIT. C.M.P. M-64(C) 146 LIM.FT.

PLAN & PROFILE - INNERBELT - STA. 30+00 to STA. 42+00

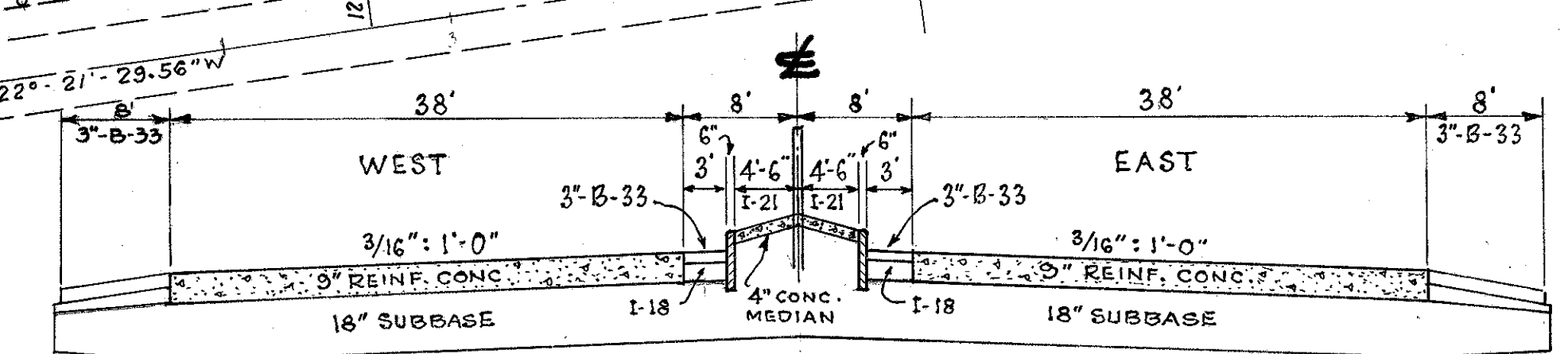
CUYAHOGA COUNTY  
Sec. CUY-42R-18.81  
CUY-322-(1.08-1.39)

NOTE  
A MARKER WILL BE  
FURNISHED AND ERRECTED ON  
THE LEFT SIDE BY THE STATE  
BEFORE ACCEPTANCE OF THIS PROJECT.

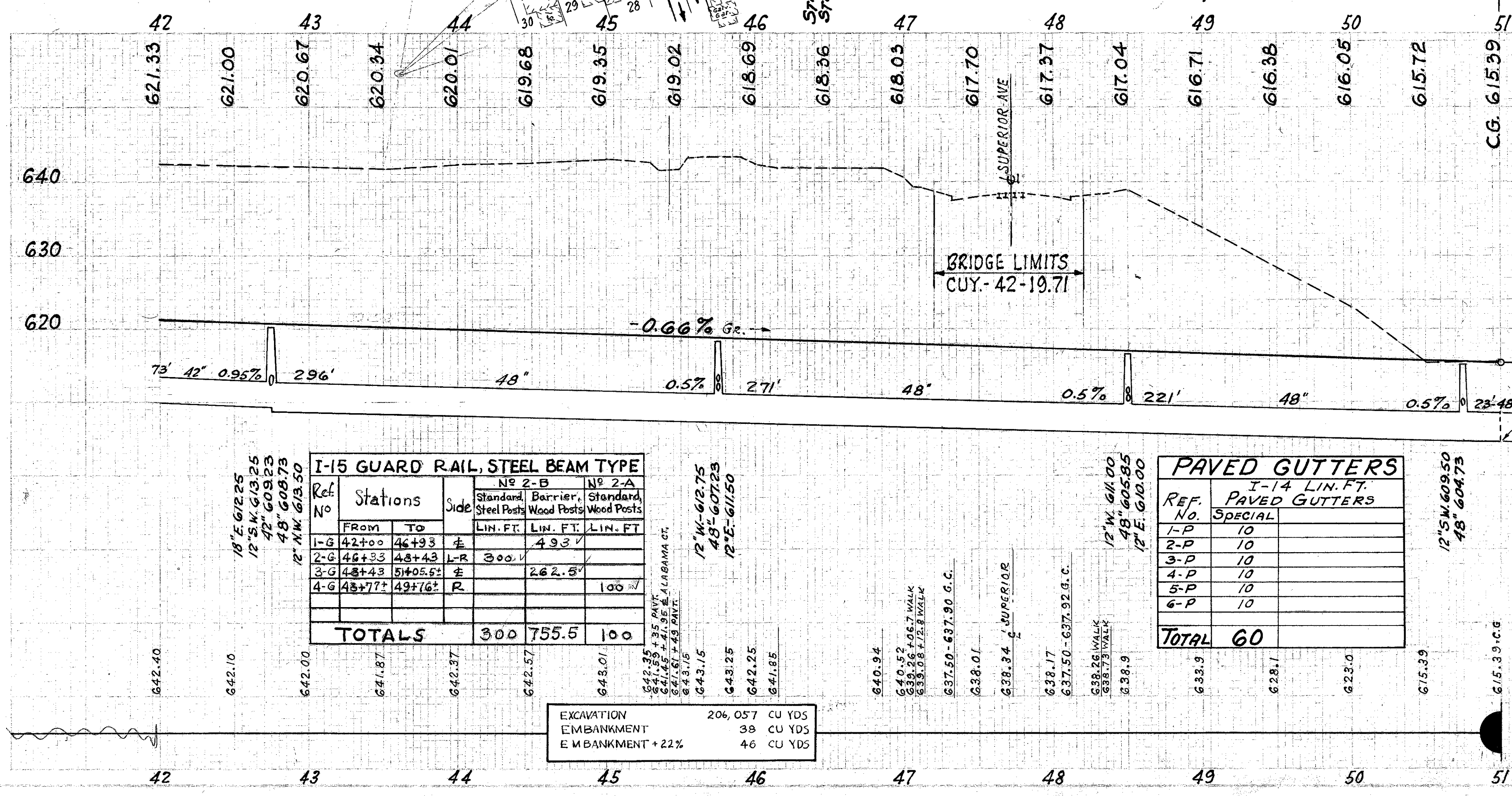
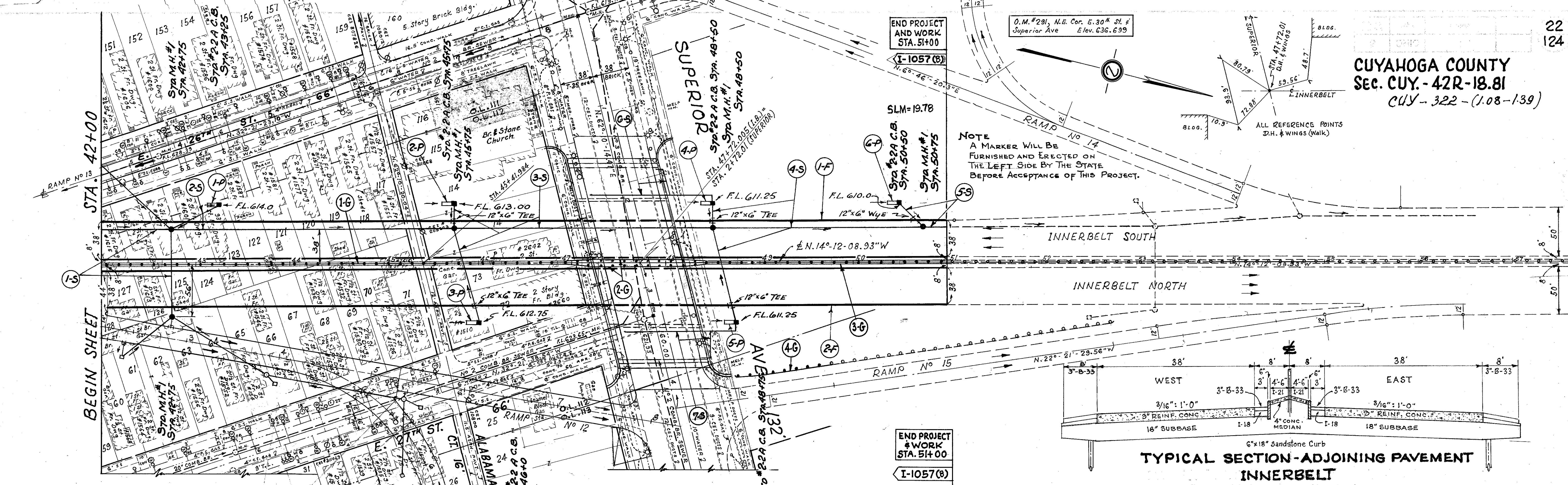
O.M. #291, N.E. Cor. E. 30th St. &  
Superior Ave ELEV. 636.639

END PROJECT  
AND WORK  
STA. 51+00  
I-1057 (8)

END PROJECT  
AND WORK  
STA. 51+00  
I-1057 (8)



TYPICAL SECTION-ADJOINING PAVEMENT  
INNERBELT  
SCALE: 3/32" = 1'-0" HOR. - 1/4" = 1'-0" VERT.



REF No.	STATION FROM TO	SIDE RT. OR LT.	I-2 LIN. FT. UNDER PAVT.				I-3 EACH		I-5 EACH CLASS 'A' UNDER PAVT. 12" x 6" TEE WYE	LOCATION OF STRUCTURE
			CLASS 'A'		CLASS 'B'		STD. M.H. #1	STD. 22A C.B.		
			12"	18"	42"	48"				
1-S	42+0	42+75	R&L	90	73		1		42+75	
2-S	42+75	45+75	LT.	54	296		1	1	42+75:43+25	
3-S	45+75	48+50	R&L	120	271		1	2	26:45+75:46+10	
4-S	48+50	50+75	R&L	120	221		1	2	26:48+50:48+75	
5-S	50+75	51+0	LT.	30	23		1	1	50+50:50+75	
<b>TOTALS</b>			<b>324</b>	<b>90</b>	<b>73</b>	<b>811</b>	<b>5</b>	<b>6</b>	<b>4</b>	<b>1</b>

THE BASE FOR M.H.'S FOR ITEMS 2-S TO 5-S TO BE ENLARGED TO ACCOMMODATE THE 48" SEWER PIPES AS DIRECTED BY THE ENGINEER. THE COST TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM I-3 STD. M.H. #1.

BRIDGE DRAIN (6-S) & (7-S) I-2 8" BIT. C.M.P. M-G.4(C) 310 LIN. FT.  
I-5 8" BIT. C.M.P. M-G.4(C) 10 EACH.

Ref. No.	Stations		Side	I-15 GUARD RAIL, STEEL BEAM TYPE		
	From	To		Standard Steel Posts	Barrier Wood Posts	Standard Wood Posts
1-G	42+00	46+33	R	300	493	100
2-G	46+33	48+43	L-R	300		
3-G	48+43	51+05.62	R	262.8'		
4-G	48+77.7	49+76.2	R			100
<b>TOTALS</b>				<b>300</b>	<b>755.5</b>	<b>100</b>

Ref. No.	Stations		Side	PAVED GUTTERS	
	From	To		I-14 LIN. FT. PAVED GUTTERS	SPECIAL
1-P	42+00	46+33	R	10	
2-P	46+33	48+43	L-R	10	
3-P	48+43	51+05.62	R	10	
4-P	48+77.7	49+76.2	R	10	
5-P	48+77.7	49+76.2	R	10	
6-P	48+77.7	49+76.2	R	10	
<b>TOTAL</b>				<b>60</b>	

Ref. No.	Stations		Side	6" UNDERDRAINS	
	From	To		I-4 LIN. FT.	5'-0" DEEP
1-F	42+00	51+0	LT.	894	
2-F	42+05	51+0	RT.	891	
<b>TOTALS</b>				<b>1785</b>	

EXCAVATION 206,057 CU YDS  
EMBANKMENT 38 CU YDS  
EMBANKMENT + 22% 46 CU YDS



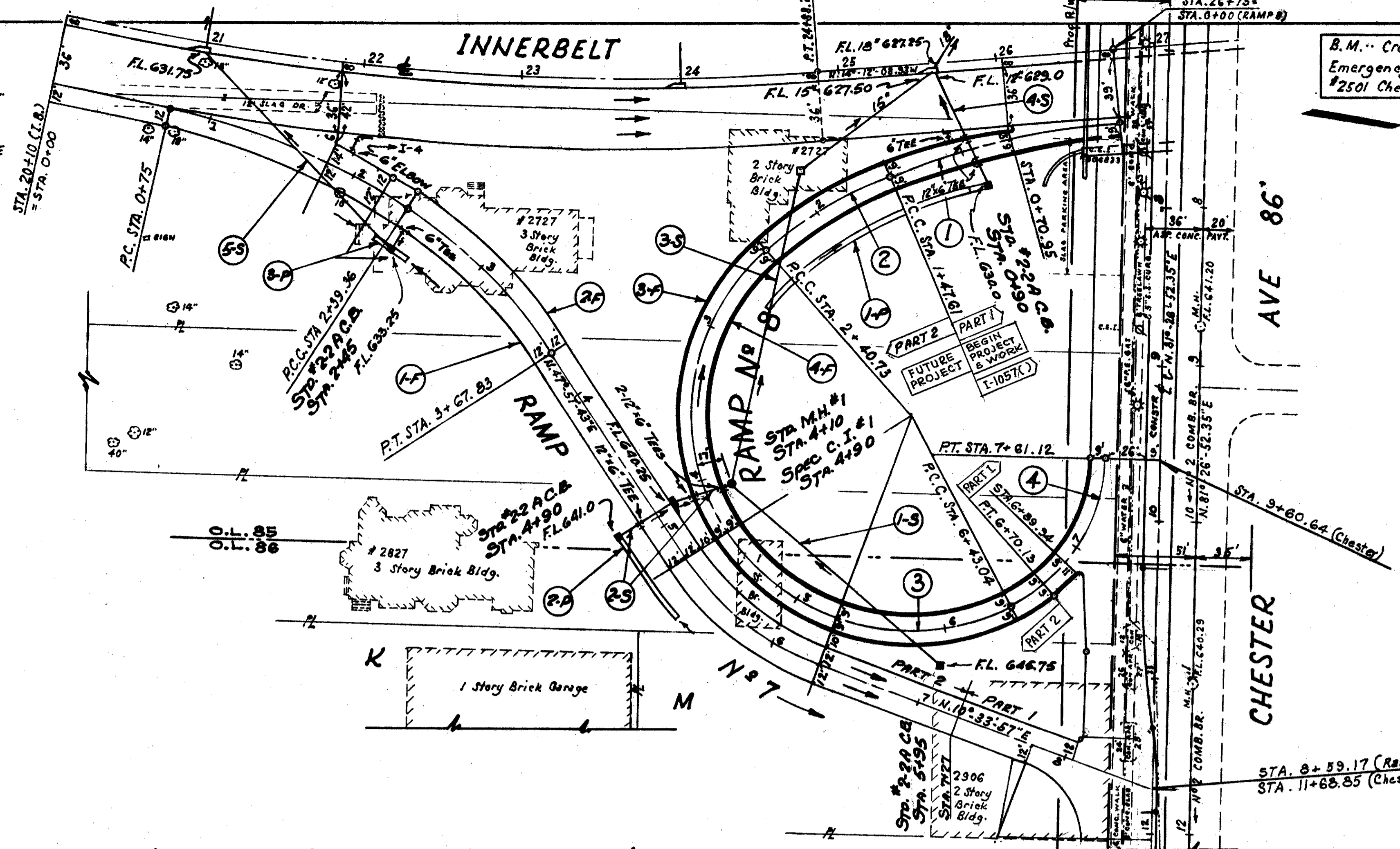


**RAMP NO 8 CURVE DATA**

①	②	③	④
R = 509.00'	R = 269.00'	R = 139.00'	R = 109.00'
Δ = 16° 36' 57"	Δ = 19° 43' 59"	Δ = 165° 50' 08"	Δ = 62° 03' 55"
T = 74.33'	T = 47.03'	T = 118.79'	T = 65.58'
L = 147.61'	L = 93.12'	L = 402.32'	L = 118.07'
Ch = 147.09'	Ch = 92.65'	Ch = 275.88'	Ch = 112.39'

**INNERBELT CURVE DATA**

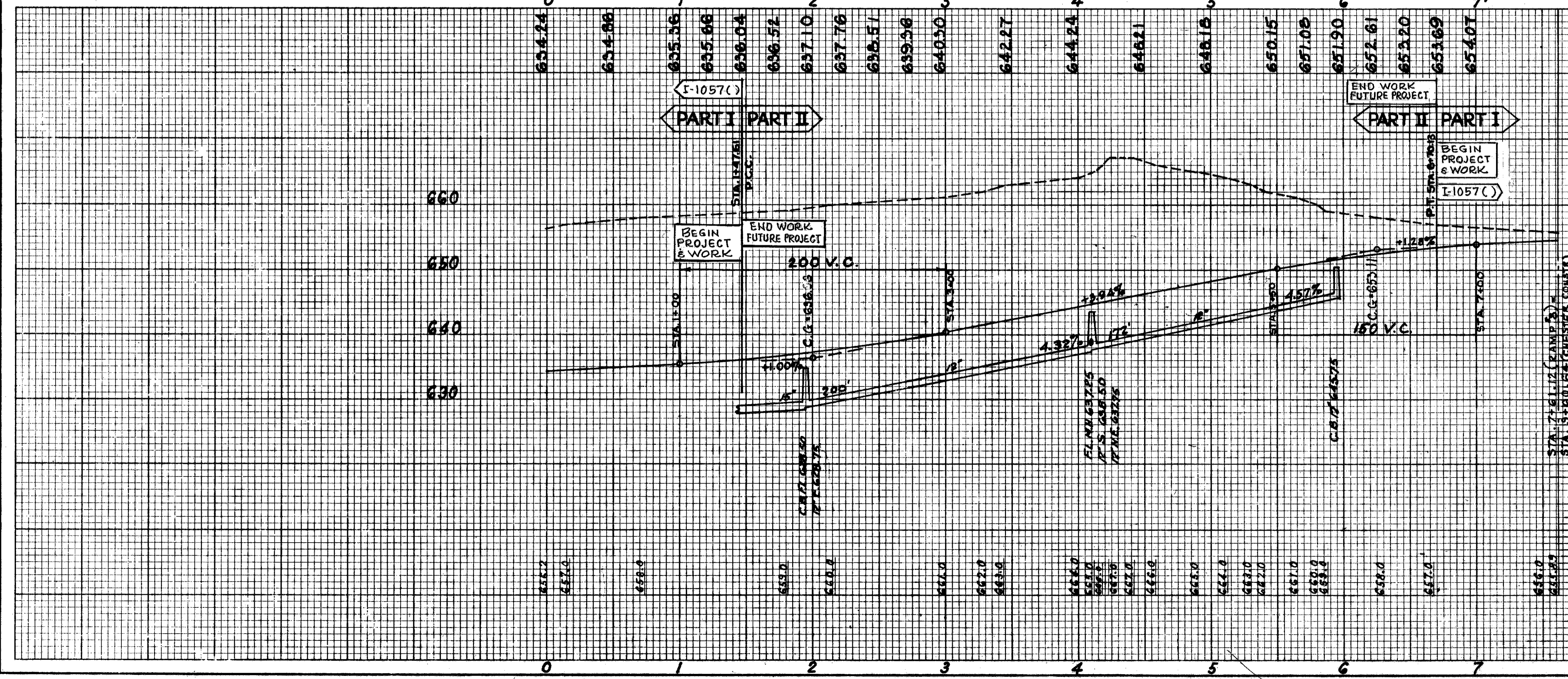
Δc = 3° 30' 00"
Δ = 69° 59' 46.27"
R = 1637.02'
T = 1146.17'
Ch = 1877.82'
N. 20° 47' 44.21" E
L = 1993.83'
EXT. = 361.37'



B.M. Cross, S.E. Cor. stone step  
Emergency Entrance Chester Ave Clinic  
#2501 Chester Ave. Elev. 656.933

FED. NO. DIVISION	STATE	PROJECT
2	OHIO	

**CUYAHOGA COUNTY**  
Sec. CUY. - 42R-18.81  
CUY-322-(1.08-1.39)



**(Ramp #7A) 6" UNDERDRAINS**

REF. No.	STATION FROM TO	SIDE RT. OR LT.	I-4 LIN. FT.		I-5 EACH	
			CURB OR 5'-0" DEEP	5'-0" DEEP	OUTLETS FOR UNDERDRAINS	G" PIPE SPECIALS TEE ELBOW
1-F	0+10	RT.	778	772	10	1
2-F	1+90	LT.	612	622	6	1
3-F	0+95	RT.	622	622	2	1
4-F	0+0	LT.	64	652		
<b>PART 2 TOTALS</b>			<b>1084</b>	<b>1210</b>	<b>16</b>	<b>1</b>
<b>PART 1 TOTALS</b>			<b>214</b>	<b>214</b>	<b>2</b>	<b>1</b>

PART 2 & PART 1 QUANTITIES DIVIDED AS SHOWN IN PLAN ABOVE.

**STORM SEWERS (RAMP #7A)**

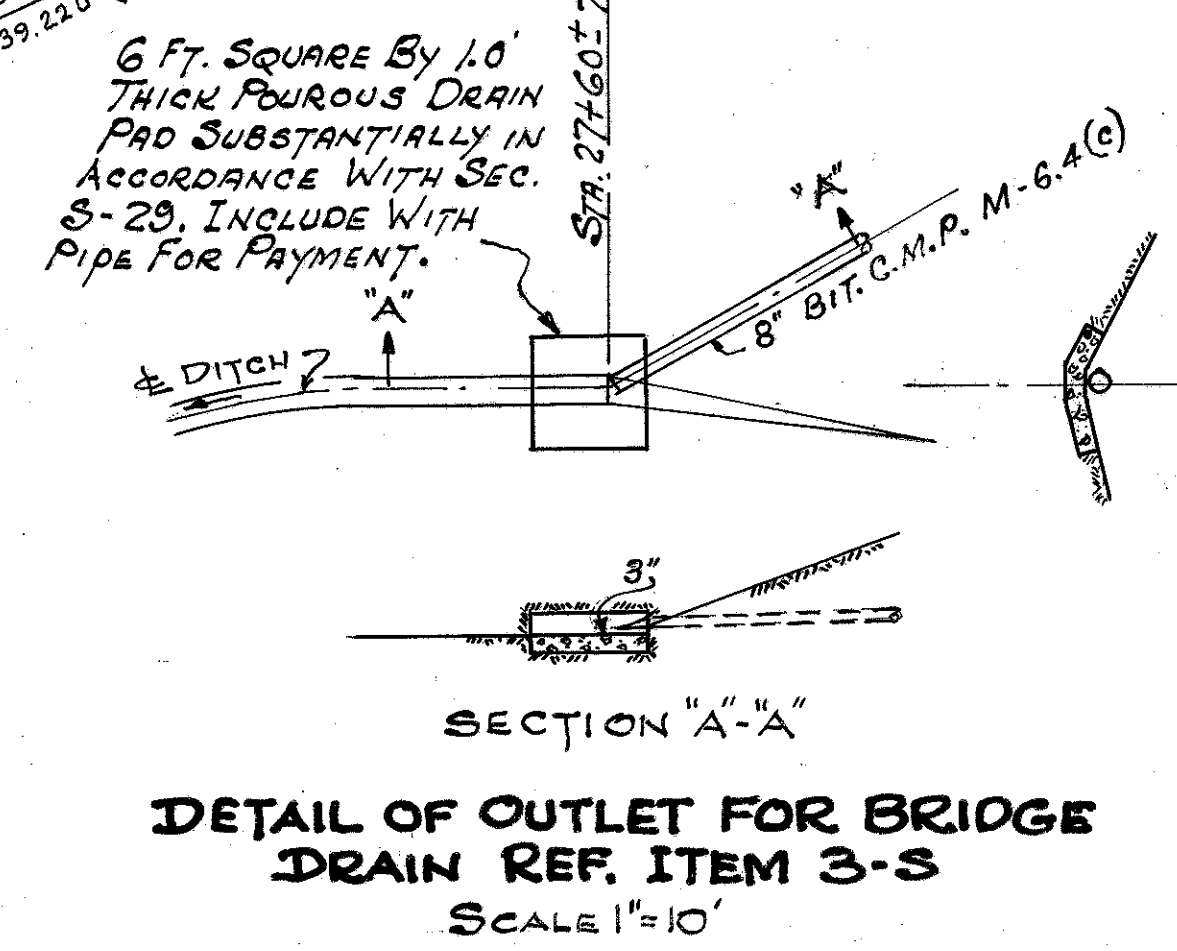
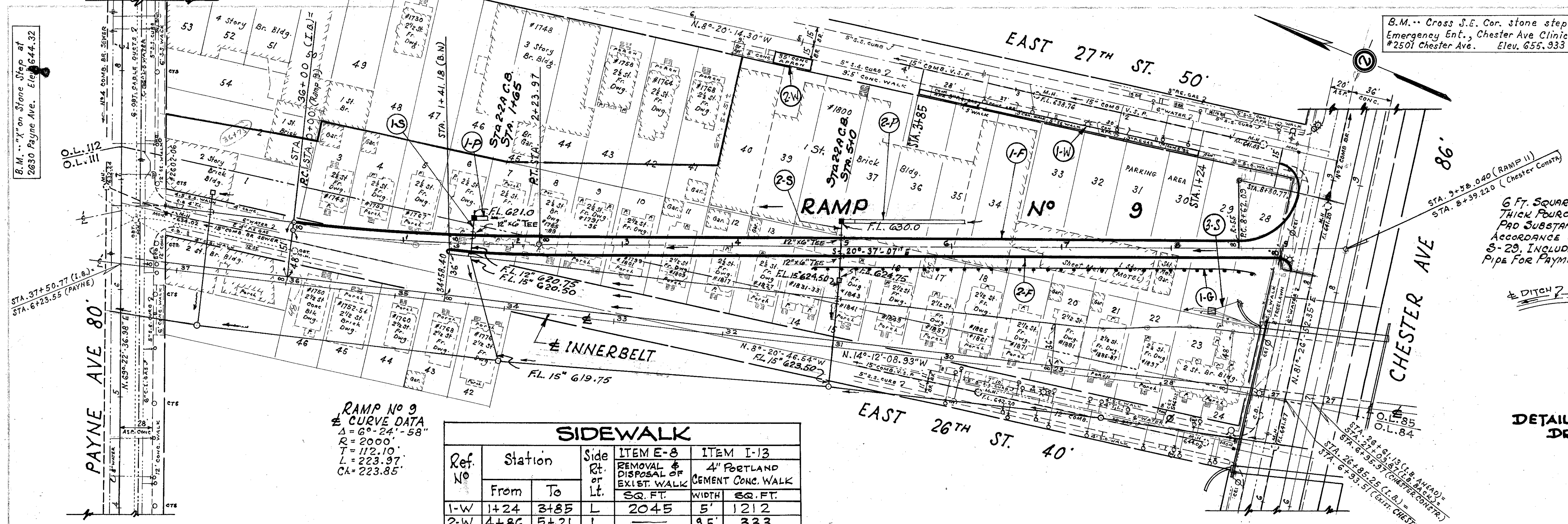
REF. No.	STATION FROM TO	SIDE RT. OR LT.	I-2 LIN. FT.		I-3 EACH		I-5 EA.		LOCATION OF STRUCTURE
			12" UNDER PAVT 12" CLASS	12" CLASS	STD. M.H. #1	STA. #22A C.B. #1	Spec. C.I. #1	Un. PAVT. PIPE SPECIALS 12" X 6" TEE G.A.D.S.	
1-S	4+10	RT.	REL. 100	72					5196
2-S	4+90 (P)	LT.	440 (B) REL.	36 30					204190
3-S	4+10	RT.	247 (B) REL.	124					4710
4-S	0+90	LT.	2340 (B) REL.	74					0790
5-S	0+46 (P)	LT.	210 (B) REL.	172					2743
<b>(PART 2) TOTALS</b>			<b>1002</b>	<b>230</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>2</b>
<b>(PART 1) TOTALS</b>			<b>74</b>						<b>2</b>

ITEM REF. 4-5 TO BE BUILT AS PART 1.

**PAVED GUTTERS**

REF. No.	SPEC.	I-4 LIN. FT.	
		PAVED GUTTERS	MODIFIED
1-P	10	44	PART 1
2-P	10	50	
3-P	20		
1-P		106	PART 2
<b>TOT.</b>		<b>30</b>	<b>156 (PART 2)</b>
<b>TOT.</b>		<b>10</b>	<b>44 (PART 1)</b>

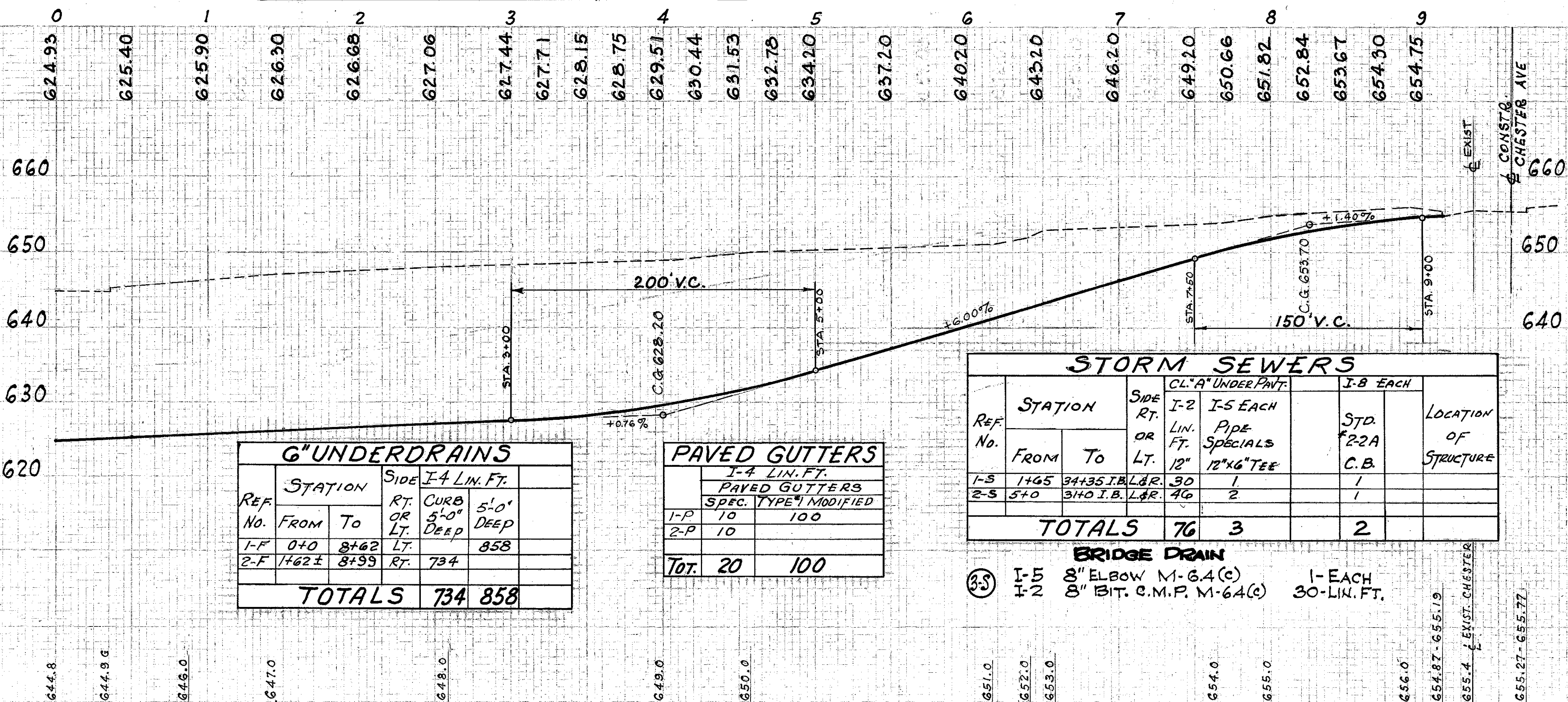
B.M. Cross S.E. Cor. stone step  
Emergency Ent., Chester Ave Clinic  
#2501 Chester Ave. Elev. 655.333



RAMP No 9  
± CURVE DATA  
Δ = 6°-24'-58"  
R = 2000'  
T = 112.10'  
L = 223.97'  
CA = 223.85'

Ref. No	Station		Side Rt. or Lt.	ITEM E-8		ITEM I-13	
	From	To		REMOVAL & DISPOSAL OF EXIST. WALK SQ. FT.	4" PORTLAND CEMENT CONC. WALK WIDTH SQ. FT.		
1-W	1+24	3+85	L	2045	5'	1212	
2-W	4+86	5+21	L		8.5'	333	
<b>TOTAL</b>				<b>2045</b>		<b>1545</b>	

Station & Drive	ITEM E-8		ITEM E-10		ITEM I-11		ITEM I-12		ITEM I-13	
	Side Rt. or Lt.	SQ. YDS.	REMOVAL & DISPOSAL OF EXIST. CURB PAVTS.	REPLACE BULLDOZE PAVT.	EMBANKMENT	SEEDING AND PROTECTING	6" x 18" S.S. CURB	11" BULLDOZE	122	120
E-27 2+05	L	26.9	30	30	5					
E-27 3+08	L	28.5	27	27	6					
E-27 3+60	L	29.7	28	28	6					
E-27 5+03	L	36.9	35	35	11	75				
<b>TOTAL</b>			<b>122</b>	<b>120</b>	<b>34</b>	<b>75</b>				



Ref. No.	STATION		Side Rt. or Lt.	CURB 5'-0" DEEP	5'-0" DEEP
	From	To			
1-F	0+0	3+62	LT.		858
2-F	1+62±	3+99	RT.	734	
<b>TOTALS</b>				<b>734</b>	<b>858</b>

Ref. No.	STATION		Side Rt. or Lt.	CURB 5'-0" DEEP	5'-0" DEEP
	From	To			
1-P	10	100			
2-P	10	100			
<b>TOT.</b>				<b>20</b>	<b>100</b>

Ref. No.	STATION		Side Rt. or Lt.	CL. A UNDER PAVT.		I-5 EACH	I-5 PIPE SPECIALS	I-5 TEE	I-5 ELBOW
	From	To		I-2 LIN. FT.	I-3				
1-S	1+65	34+35	LT.	90	1				
2-S	5+0	34+0	RT.	90	2				
<b>TOTALS</b>				<b>76</b>	<b>3</b>				

**BRIDGE DRAIN**  
 I-1 5 8" ELBOW M-64(C) 1-EACH  
 I-2 8" BIT. C.M.P. M-64(C) 30-LIN. FT.

Ref. No.	STATION		Side	I-15 GUARD RAIL, ST. BEAM TYPE	
	From	To		Standard Wood Posts	Lin. Ft.
1-G	4+75	5+75	R	400	
<b>TOTALS</b>				<b>400</b>	

Ref. No.	STATION		Side	I-4 LIN. FT.		I-5 EACH
	From	To		CURB SHAL-LOW	OUTLETS FOR UNDERDRAINS	
1-F	0-110	0-175	RT.	130		
2-F	0+35	1+61	LT.	92	36	
3-F	0+59	1+61	RT.	102		
8-F	12+05	13+10	LT.	104		
11-F	17+87	12+96	RT.	90	56	2
<b>URBAN-TOTALS</b>				<b>518</b>	<b>92</b>	<b>2</b>
3-F	1+61	6+28	RT.	466		
4-F	2+35	6+20	LT.	384		
5-F	2+0	6+24	LT.	426	6	1
6-F	2+25	6+26	RT.	398	6	1
7-F	7+62	8+09	LT.	46	10	2
8-F	9+51	12+05	LT.	252		
9-F	7+70	9+60	RT.	190		
10-F	10+34	11+39	RT.	94		
12-F	7+66	11+80	LT.	412	6	1
13-F	7+68	11+40	RT.	370	6	1
<b>INTERSTATE TOTALS</b>				<b>3038</b>	<b>34</b>	<b>4 2</b>

B.M. Cross, S.E. Cor. Stone Step  
Emergency Ent. Chester Ave Clinic  
#2501 Chester. Elev. 655.933

**CUYAHOGA COUNTY**  
Sec. CUY-42R-18.81  
CUY-322-(1.08-1.39)

**RAMP NO 10**  
**CURVE DATA**

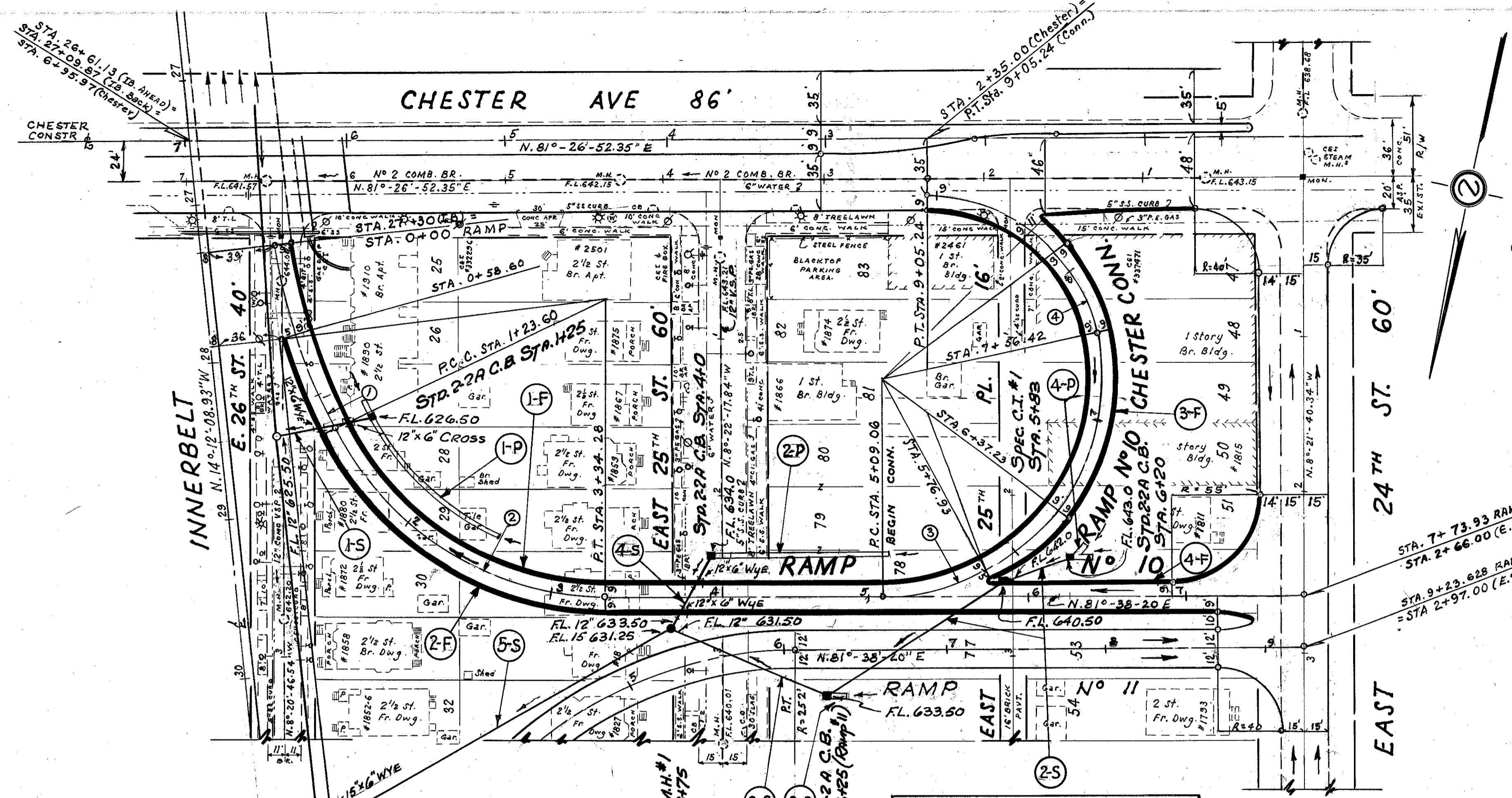
①  
R = 349.00'  
Δ = 20°-17'-29"  
T = 62.45'  
L = 123.60'  
Ch. = 122.95'

②  
R = 189.00'  
Δ = 63°-52'-03"  
T = 117.80'  
L = 210.68'  
Ch. = 199.94'

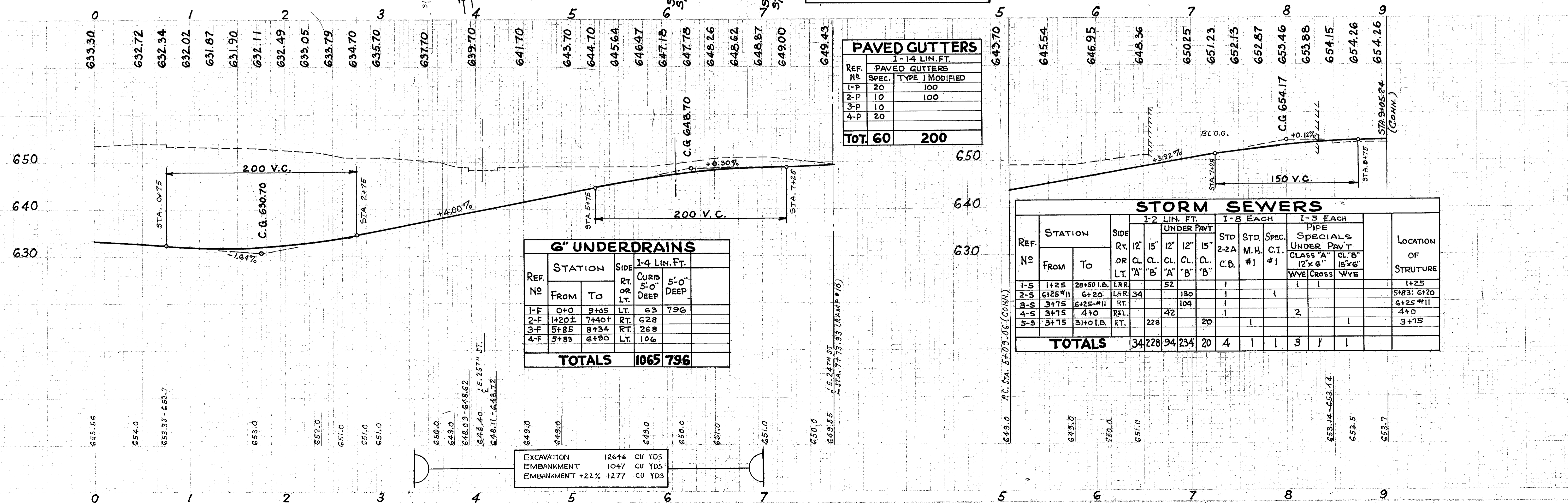
**RAMP NO 10-CHESTER CONN.**  
**CURVE DATA**

③  
R = 139.00'  
Δ = 101°-57'-44"  
T = 171.64'  
L = 247.36'  
Ch. = 216.04'

④  
R = 109.00'  
Δ = 78°-13'-43"  
T = 88.63'  
L = 148.82'  
Ch. = 137.53'



FOR SEWER PROFILE SEE PLAN  
& PROFILE SHEET FOR RAMP #11.



**PAVED GUTTERS**  
1-14 LIN. FT.

REF. NO.	PAVED GUTTERS SPEC. TYPE I MODIFIED
1-P	20 100
2-P	10 100
3-P	10
4-P	20
<b>TOT.</b>	<b>60 200</b>

**6" UNDERDRAINS**  
1-4 LIN. FT.

REF. NO.	STATION		SIDE	1-4 LIN. FT.	
	FROM	TO		CURB DEEP	5'-0" DEEP
1-F	0+0	9+05	LT.	63	796
2-F	1+20±	7+40±	RT.	628	
3-F	5+85	8+34	RT.	268	
4-F	5+83	6+90	LT.	106	
<b>TOTALS</b>				<b>1065</b>	<b>796</b>

**STORM SEWERS**

REF. NO.	STATION FROM TO	SIDE OR LT.	1-2 LIN. FT. UNDER PAVT					I-8 EACH			I-5 EACH			LOCATION OF STRUCTURE	
			12"	15"	12"	15"	STD. C.B.	STD. M.H. #1	SPEC. C.I. #1	PIPE CLASS "A" UNDER PAVT	PIPE CLASS "B" UNDER PAVT	PIPE CLASS "C" UNDER PAVT			
			CL. "A"	CL. "B"	CL. "A"	CL. "B"				12"x6"	15"x6"	WYE			
1-S	1+25	28+50 I.B.	L.R.			52									1+25
2-S	6+25 #11	6+20	L.R.	34			130		1		1				5+83; 6+20
3-S	3+75	6+25 #11	RT.				104		1						6+25 #11
4-S	3+75	4+0	R&L.			42			1			2			4+0
5-S	3+75	3+0 I.B.	RT.			228				1					3+75
<b>TOTALS</b>				<b>34</b>	<b>228</b>	<b>94</b>	<b>234</b>	<b>20</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	

EXCAVATION	12646	CU YDS
EMBANKMENT	1047	CU YDS
EMBANKMENT +22%	1277	CU YDS

PLAN & PROFILE -- RAMP NO 10 & RAMP NO 10 - CHESTER CONN.

**RAMP No 11**  
**Curve Data**

②  
 R = 1012.00'  
 Δ = 13°-54'-21"  
 T = 123.41'  
 L = 245.62'  
 CA = 245.01'

①  
 R = 252.00'  
 Δ = 81°-56'-08"  
 T = 218.81'  
 L = 360.37'  
 CA = 330.44'

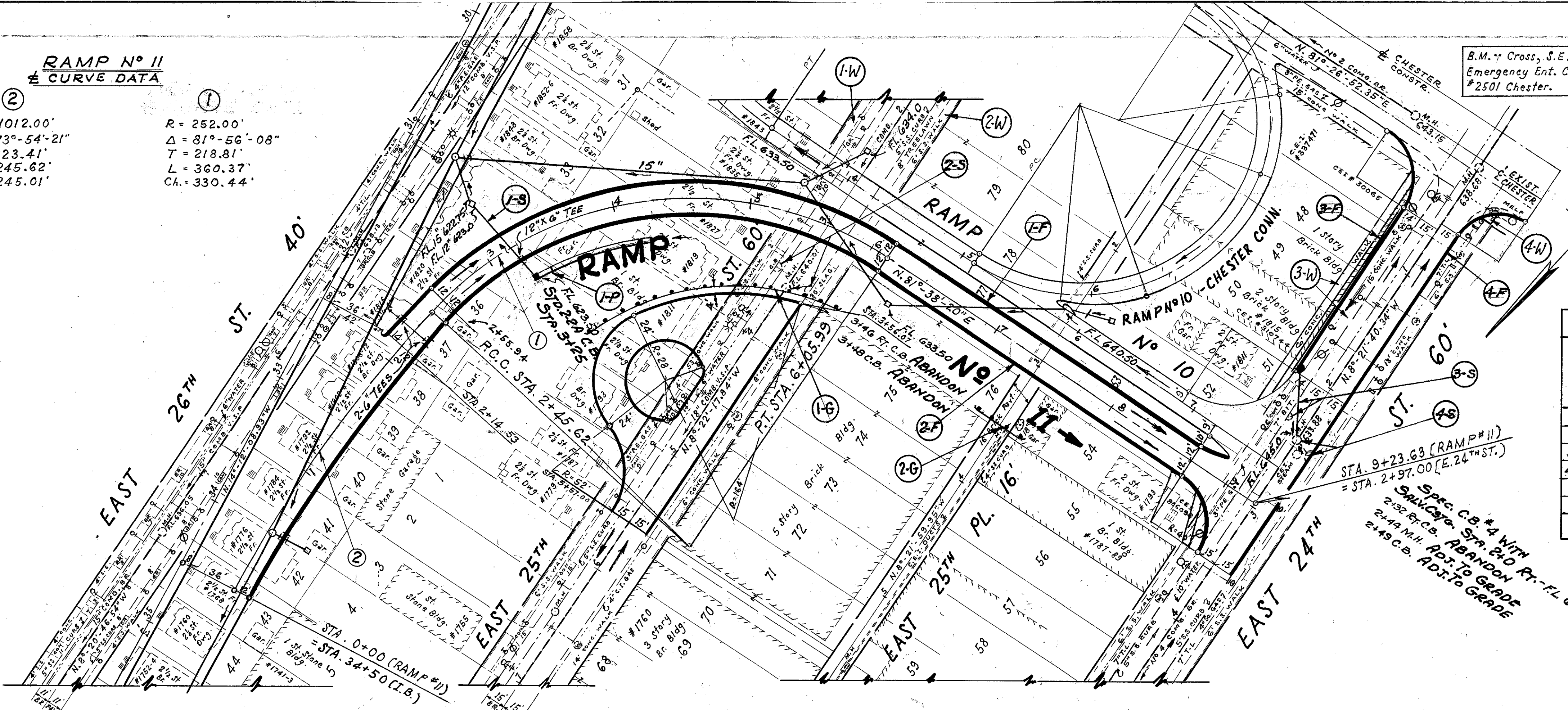
CUYAHOGA COUNTY  
 Sec. CUY-42R-18.81  
 CUY-322-(1.08-1.39)

**DRIVEWAY QUANTITIES**

Street	Station ± Apron	Side Rt. or Lt.	ITEM E-8 REMOVAL & DISPOSAL OF EXIST. DRIVE PAVT. SQ. YDS.
E. 25	2+39	R	7.6
E. 25	2+81	R	8.4
E. 25	4+80	R	8.4
E. 25	5+19.5	R	7.6
<b>TOTAL</b>			<b>32</b>

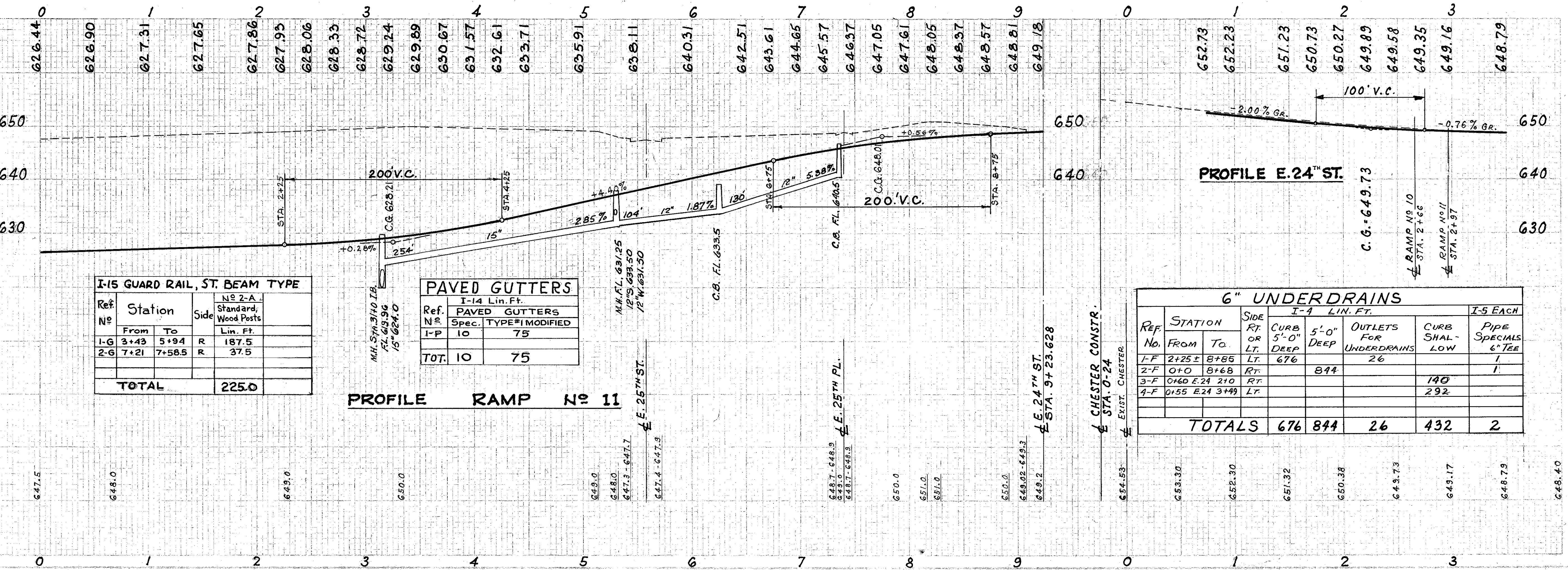
**SIDEWALK**

Ref. No	Station		Side Rt. or Lt.	ITEM E-8	ITEM I-13
	From	To		REMOVAL & DISPOSAL OF EXIST. WALK SQ. FT.	4" PORTLAND CEMENT CONCRETE WALK WIDTH SQ. FT.
1-W	E. 25 2+00	ST. 5+25	R	2541	—
2-W	2+00	3+55	L	930	—
3-W	E. 24 0+20	ST. 3+49	R	4104	6' 1440
4-W	0+20	0+34	L	266	Var. 18
<b>TOTAL</b>				<b>7841</b>	<b>1458</b>



**STORM SEWERS**

Ref. No.	STATION FROM TO	SIDE	I-2 LIN. FT.		I-8 EACH		I-16 EA.		LOCATION OF STRUCTURE
			UNDER PAVT.	REL.	Spec. C.B. #4	ADJUST TO GRADE	Spec. C.B. #4	ABANDON DOWN C.B.	
1-S	3+25 I.B. 3+25	REL.		66					3+25
2-S	3+46 E-25 3+57	REL.		48					3+46:181+57
3-S	2+10 E-24 2+44	Rt.							2+40: 2+52
4-S	2+14 E-24 2+49	Lt.							2+44: 2+49
<b>TOTALS</b>				<b>6648</b>					



**I-15 GUARD RAIL, ST. BEAM TYPE**

Ref. No.	Station	Side	NO 2-A Standard Wood Posts Lin. Ft.
1-G	3+43	R	187.5
2-G	7+21	R	37.5
<b>TOTAL</b>			<b>225.0</b>

**PAVED GUTTERS**  
 I-14 Lin. Ft.

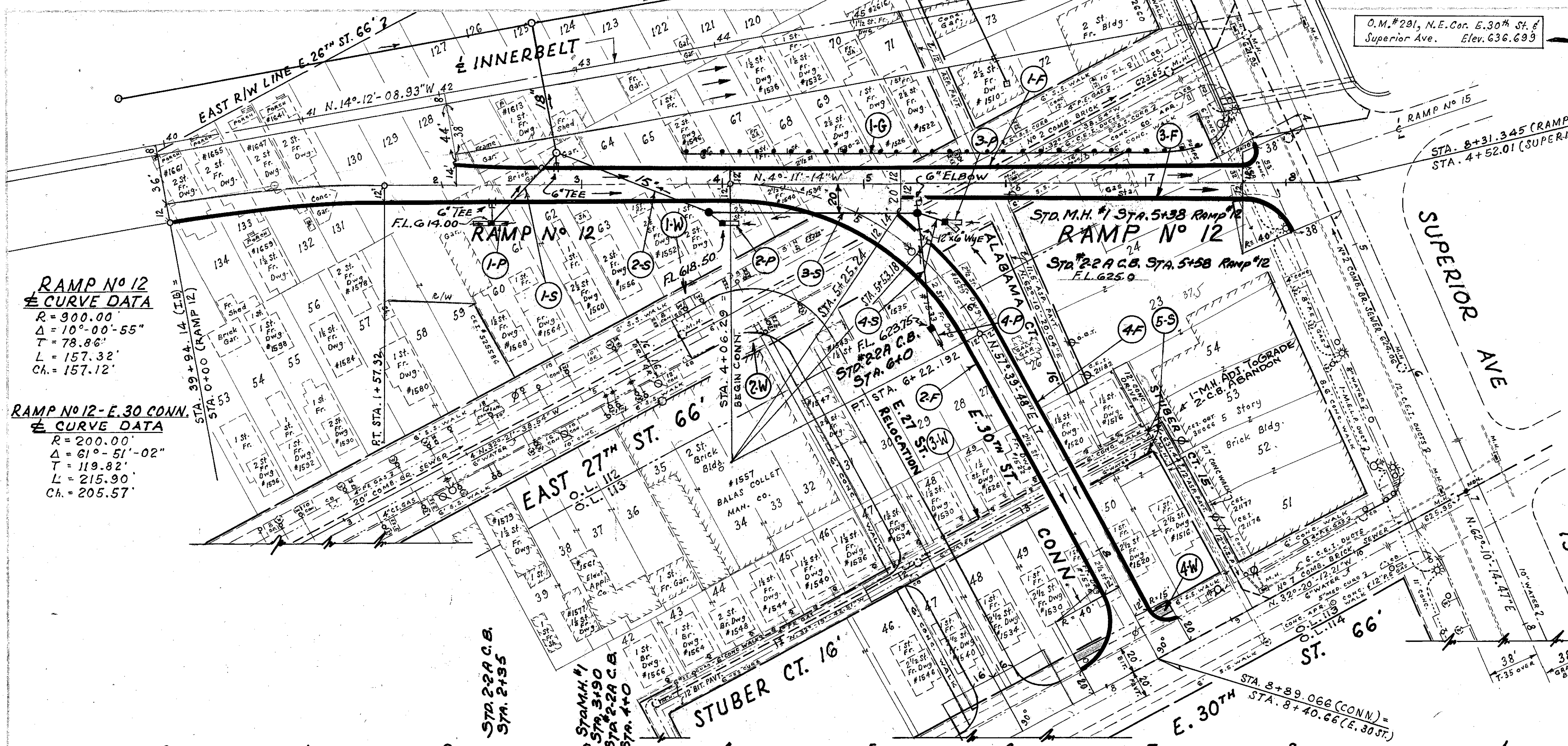
Ref. No.	Spec. TYPE#1 MODIFIED	Lin. Ft.
1-P	10	75
<b>TOT.</b>		<b>75</b>

**6" UNDERDRAINS**  
 I-4 LIN. FT.

Ref. No.	STATION FROM TO	SIDE	CURB OR LT. DEEP	5'-0" DEEP	OUTLETS FOR UNDERDRAINS	CURB SHAL-LOW	I-5 EACH
							PIPE SPECIALS 6" TEE
1-F	2+25 ± 8+85	LT.	676	26			1
2-F	0+0 8+68	RT.	814			140	1
3-F	0+60 E-24 2+10	RT.					
4-F	0+55 E-24 3+49	LT.				292	
<b>TOTALS</b>			<b>676</b>	<b>814</b>	<b>26</b>	<b>432</b>	<b>2</b>

E. 25th St. (TURN-AROUND) ... PLAN & PROFILE ... RAMP No 11 & EAST 24th St.

O.M. #281, N.E. Cor. E. 30th St. & Superior Ave. Elev. 636.699



**RAMP #12**  
**CURVE DATA**  
R = 900.00  
Δ = 10° 00' 55"  
T = 78.86'  
L = 157.32'  
Ch. = 157.12'

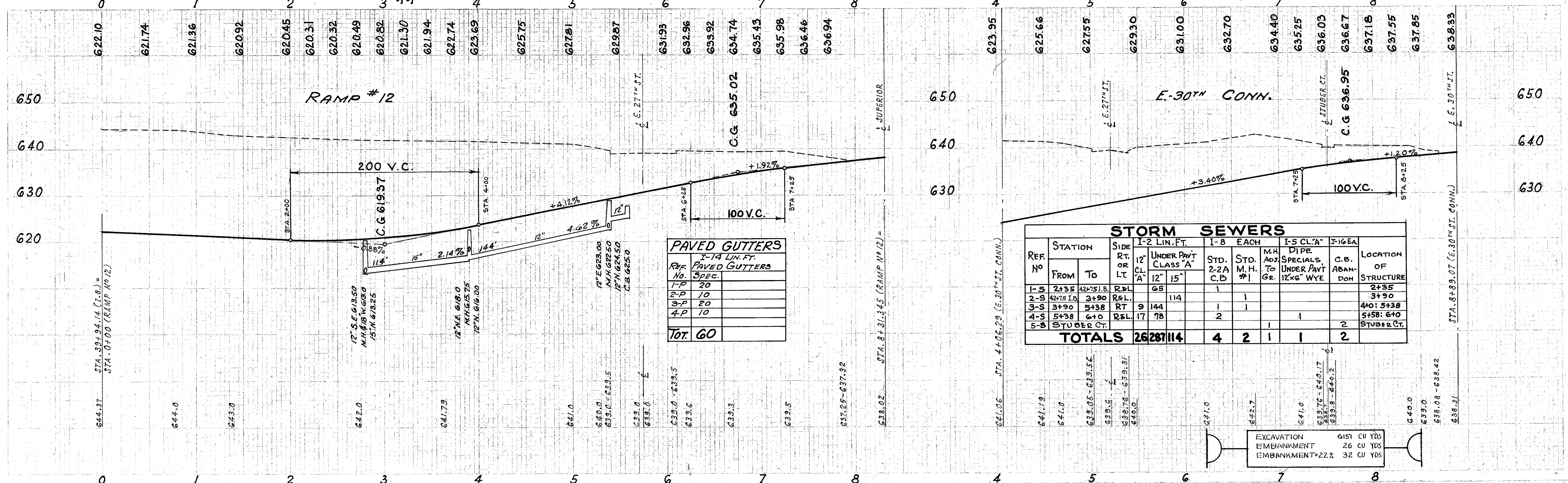
**RAMP #12 - E. 30th CONN.**  
**CURVE DATA**  
R = 200.00  
Δ = 61° 51' 02"  
T = 119.82'  
L = 215.90'  
Ch. = 205.57'

SIDEWALK					
Ref. No	Station		Side Rt. or Lt.	ITEM E-8	ITEM I-13
	From	To		REMOVAL & DISPOSAL OF EXIST. WALK SQ. FT.	4" PORTLAND CEMENT CONCRETE WALK WIDTH SQ. FT.
1-W	5+88	8+16	L	1434	-
2-W	6+26	8+11	R	1209	-
3-W	3+36	8+56.5	L	1382	-
4-W	7+30	8+68	L	474	222
<b>TOTAL</b>				<b>4559</b>	<b>222</b>

I-15 GUARD RAIL, STEEL BEAM TYPE				
Ref. No	Station		Side	NO 2-A Standard Wood Posts
	From	To		Lin. Ft.
1-G	3+75	7+37.5	L	362.5
<b>TOTAL</b>				<b>362.5</b>

6" UNDERDRAINS						
REF. NO	STATION		SIDE RT. OR LT.	I-4 LIN. FT.		I-5 EACH 6" PIPE SPECIALS
	FROM	TO		CURB 5'-0" DEEP	5'-0" DEEP	
1-F	2+10	7+68	LT.	556	8	
2-F	0+0	8+29 Conn.	RT.	812	10	1
3-F	5+38	7+69	RT.	230	4	
4-F	5+50 Conn.	8+54	LT.	308		
<b>TOTALS</b>				<b>864</b>	<b>1042</b>	<b>22</b>

DRIVEWAY QUANTITIES										
Station	Side	ITEM E-8	ITEM E-11	ITEM E-10	ITEM L-9	REMOVAL OF EXIST. CURB	REMOVAL OF EXIST. BILLOWSE PAVT.	EM-BANK. 12" X 6" WYE	SEEDING	TOTAL
E. 27	L									30
E. 30	L									36
<b>TOTAL</b>										<b>9.0</b>



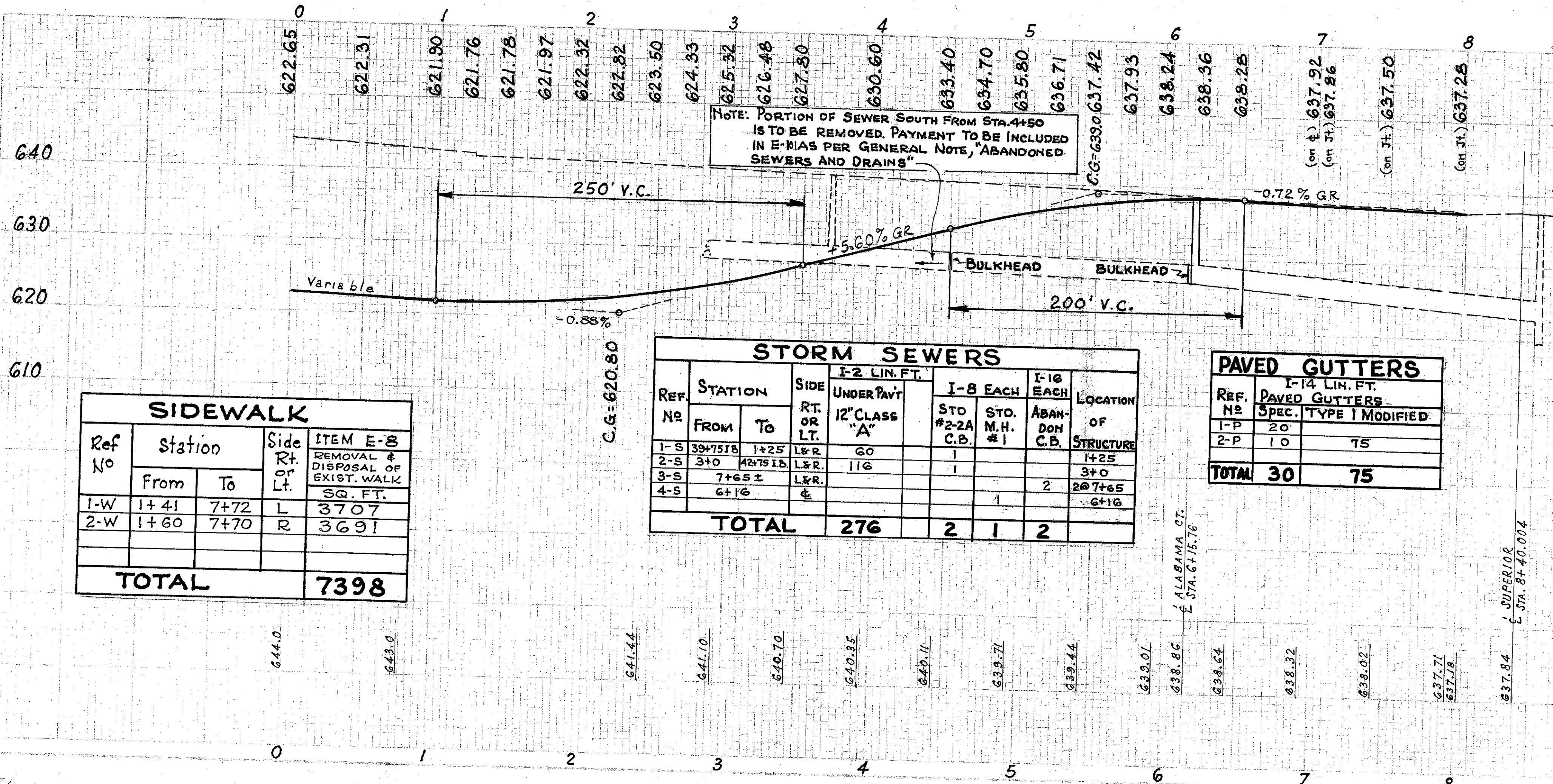
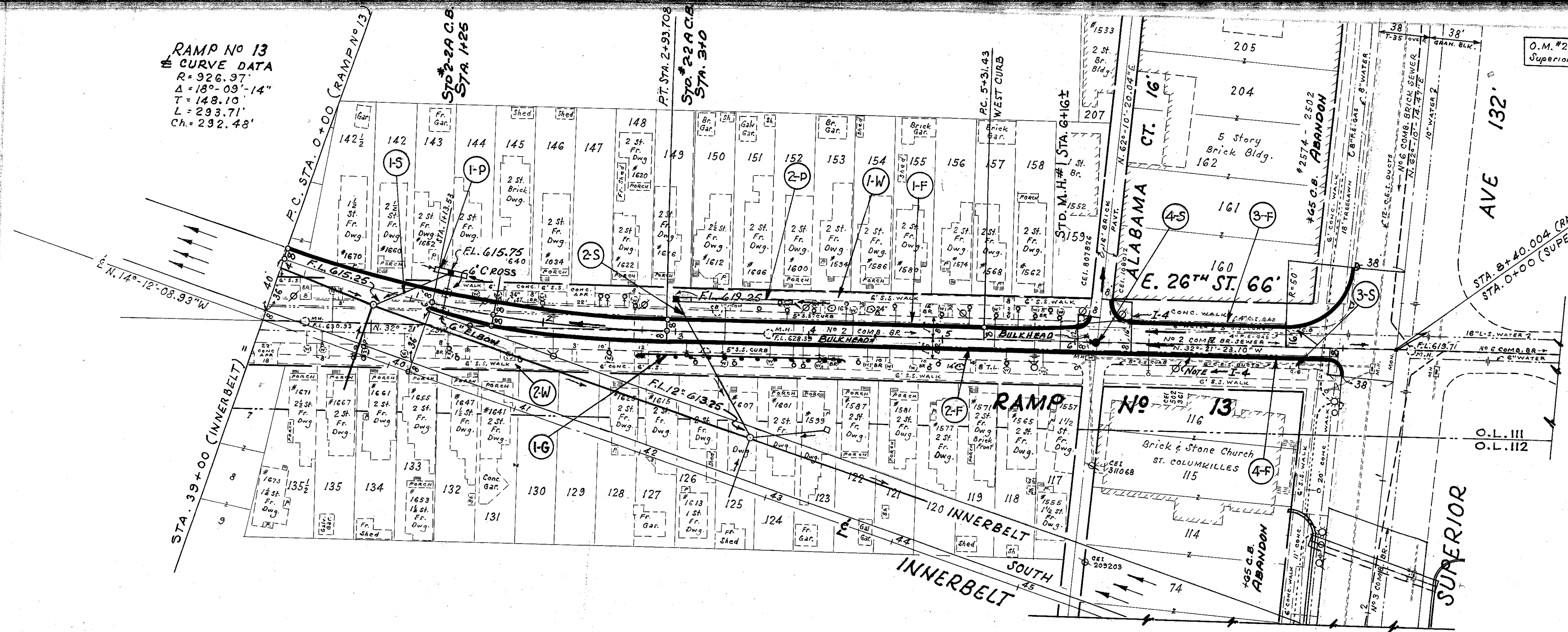
PAVED GUTTERS		
REF. NO.	CLASS	LENGTH
1-P	20	
2-P	10	
3-P	20	
4-P	10	
<b>TOT.</b>		<b>60</b>

STORM SEWERS									
REF. NO	STATION		SIDE RT. OR LT.	I-2 LIN. FT.	I-8 EACH	I-5 CL. A' SPECIALS	I-16 EA	C.B. ABANDON	LOCATION OF STRUCTURE
	FROM	TO							
1-S	2+35	4+75.8	R.L.	65					2+35
2-S	4+75.8	3+90	R.L.	114					3+90
3-S	3+90	5+38	RT.	9	1				4+0: 5+38
4-S	5+38	6+0	R.L.	17	2				5+38: 6+0
5-S	STUBER CT.								STUBER CT.
<b>TOTALS</b>				<b>2628</b>	<b>114</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>2</b>

EXCAVATION 6151 CU YDS  
EMBANKMENT 26 CU YDS  
EMBANKMENT+22% 32 CU YDS

PLAN & PROFILE - RAMP #12 and RAMP #12 - E. 30th ST. CONNECTION

RAMP NO 13  
 CURVE DATA  
 R=326.37'  
 Δ=18°-03'-14"  
 T=148.10'  
 L=293.71'  
 Ch.=292.48'



SIDEWALK				
Ref No	Station		Side Rt. or Lt.	ITEM E-8 REMOVAL & DISPOSAL OF EXIST. WALK SQ. FT.
	From	To		
1-W	1+41	7+72	L	3707
2-W	1+60	7+70	R	3691
<b>TOTAL</b>				<b>7398</b>

STORM SEWERS						
REF. NO	STATION		SIDE RT. OR LT.	I-2 LIN. FT.		LOCATION OF STRUCTURE
	FROM	TO		UNDERPAVT. 12" CLASS "A"	I-8 EACH STD. #2-2A C.B.	
1-S	39+75	1+25	L&R	60		1+25
2-S	3+0	42+75	L&R	116	1	3+0
3-S	7+65	±	L&R			20+7+65
4-S	6+16	±	±		1	6+16
<b>TOTAL</b>				<b>276</b>	<b>2 1 2</b>	

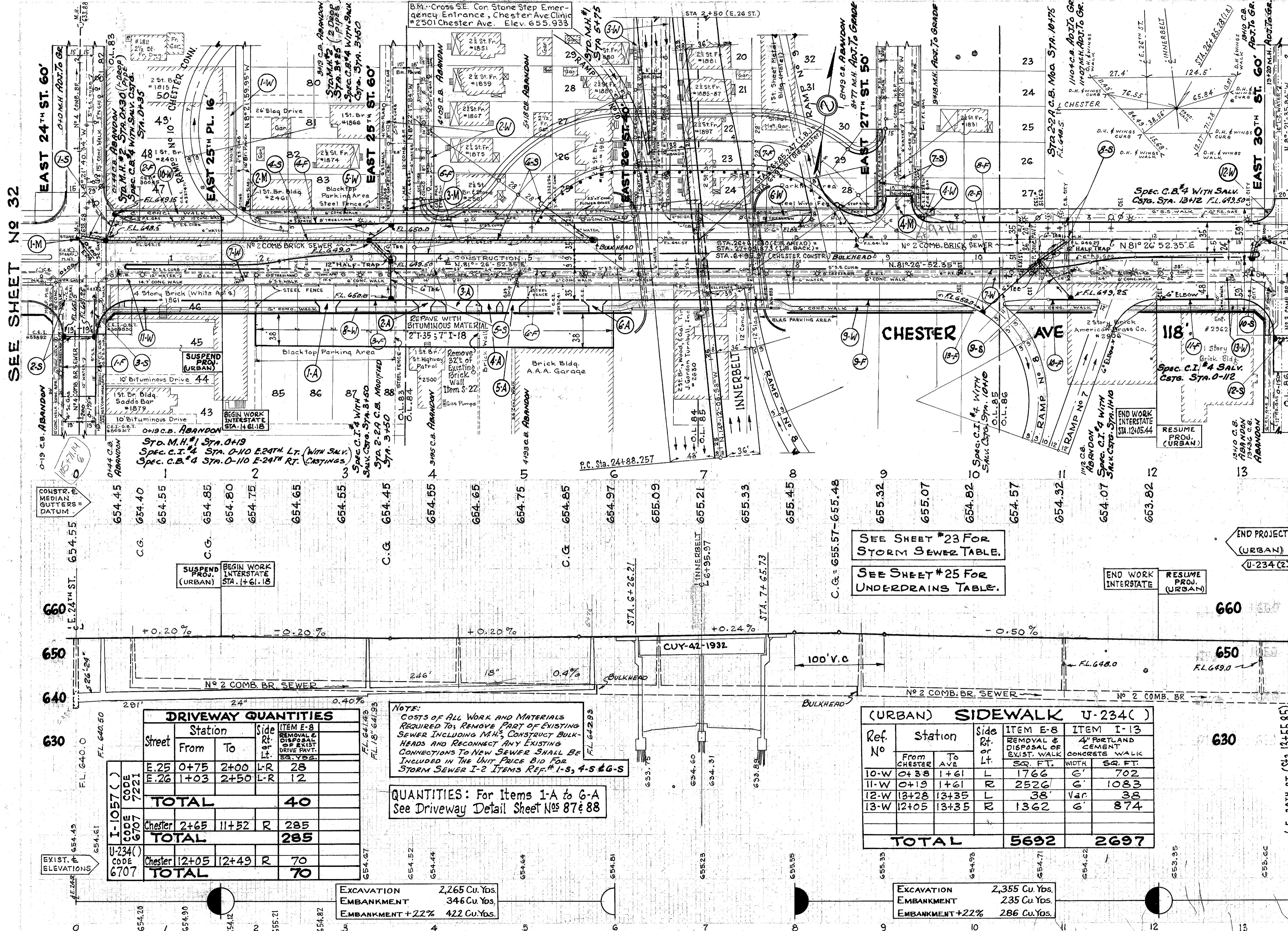
PAVED GUTTERS		
REF. NO	I-14 LIN. FT.	
	PAVED GUTTERS	Spec. TYPE I MODIFIED
1-P	20	
2-P	10	75
<b>TOTAL</b>		<b>30 75</b>

I-15 GUARD RAIL, STEEL BEAM TYPE					
Ref. No	Station	Side	LIN. FT.		
			From	To	
1-P	2+75	R	4+25	150	
<b>TOTAL</b>					<b>150</b>

DRIVEWAY QUANTITIES				
Street	Station		Side Rt. or Lt.	ITEM E-8 REMOVAL & DISPOSAL OF EXIST. DRIVE PAVEMENTS SQ. YDS.
	From	To		
E. 26	1+79	7+39	L	764.2
E. 26	1+41	6+52	R	129.8
<b>TOTAL</b>				<b>894</b>

6" UNDERDRAINS									
REF. NO	STATION		SIDE RT. OR LT.	I-4 LIN. FT.			I-5 EACH		
	FROM	TO		CURB 5'-0" DEEP	CURB SHAL-LOW	OUTLETS FOR UNDERDRAINS	G" PIPE SPECIALS	CROSS ELBOW	
1-F	0+0	6+42	LT.	636		12			
2-F	1+25	6+25	RT.	502		12			
3-F	6+42	7+57	LT.		115		1		
4-F	6+25	7+90	RT.		165				
<b>TOTALS</b>				<b>502</b>	<b>636</b>	<b>280</b>	<b>24</b>	<b>1</b>	<b>1</b>

CUYAHOGA COUNTY  
CUY - 42R-18.81  
CUY - 322- (1.08-1.39)



**PROPOSED STRUCTURE**  
TYPE: Continuous steel beams with concrete deck and concrete substructure.  
SPAN: 67'-6" - 67'-6" c/c bearings  
ROADWAY: 2 @ 35'-0" /f curbs  
SIDEWALKS: 2 @ 8'-0" on outside  
LOAD FREQUENCY: C.F. 2000 (51)  
SKEW: 5°-39'-00" Right Forward  
WEARING SURFACE: Bituminous  
APPROACH SLABS: AS-1-54 (25' Long)  
ALIGNMENT: TANGENT

SEE SHEET #23 FOR STORM SEWER TABLE.  
SEE SHEET #25 FOR UNDERDRAINS TABLE.

Street	Station		Side	ITEM E-8 REMOVAL & DISPOSAL OF EXIST. WALK DRIVE PAVT. SQ. YDS.	
	From	To			
Chester	E.25	0+75	2+00	L-R	28
	E.26	1+03	2+50	L-R	12
<b>TOTAL</b>					<b>40</b>
Chester	2+65	11+52	R		285
	<b>TOTAL</b>				<b>285</b>
Chester	12+05	12+49	R		70
	<b>TOTAL</b>				<b>70</b>

**NOTE:**  
COSTS OF ALL WORK AND MATERIALS REQUIRED TO REMOVE PART OF EXISTING SEWER INCLUDING M.A.S., CONSTRUCT BULKHEADS AND RECONNECT ANY EXISTING CONNECTIONS TO NEW SEWER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR STORM SEWER I-2 ITEMS REF.# 1-S, 4-S & G-S

**QUANTITIES:** For Items 1-A to 6-A See Driveway Detail Sheet Nos 87 & 88

Ref No	Station		Side	ITEM E-8 REMOVAL & DISPOSAL OF EXIST. WALK SQ. FT.	ITEM I-13 4" PORTLAND CEMENT CONCRETE WALK SQ. FT.
	From	To			
10-W	0+38	1+61	L	1766	702
11-W	0+19	1+61	R	2526	1083
12-W	13+28	13+35	L	38	Var.
13-W	12+05	13+35	R	1362	874
<b>TOTAL</b>				<b>5692</b>	<b>2697</b>

EXCAVATION 2,265 Cu. Yds.  
EMBANKMENT 346 Cu. Yds.  
EMBANKMENT +22% 422 Cu. Yds.

EXCAVATION 2,355 Cu. Yds.  
EMBANKMENT 235 Cu. Yds.  
EMBANKMENT +22% 286 Cu. Yds.

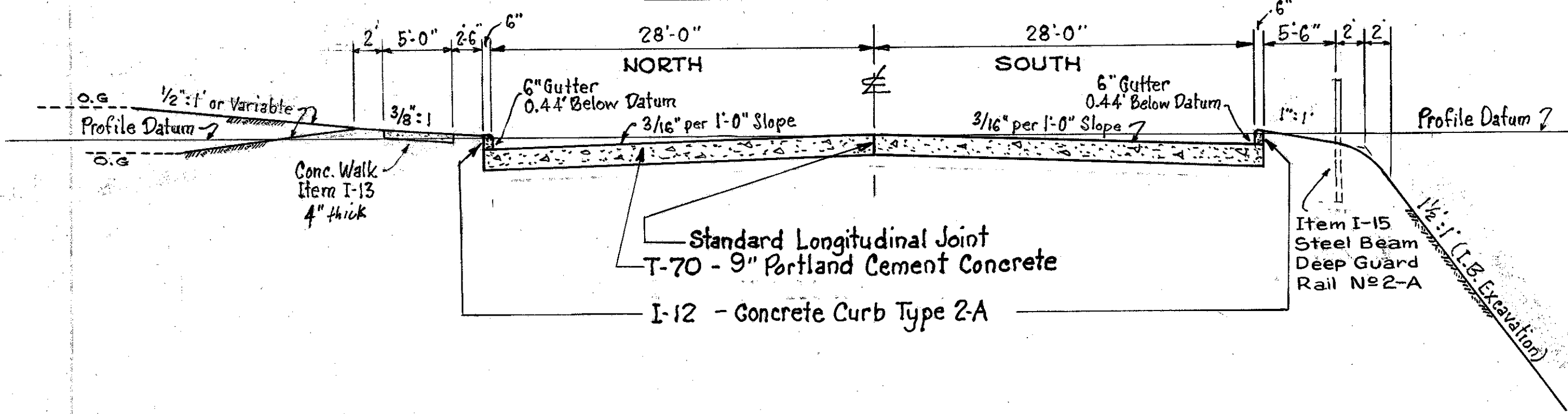
Ref No	Station	Side	ITEM E-8		ITEM I-13	
			REMOVAL & DISPOSAL OF EXIST. WALK SQ. FT.	CONCRETE WALK SQ. FT.	4" PORTLAND CEMENT CONCRETE WALK SQ. FT.	CONCRETE WALK SQ. FT.
1-W	0+25	R	966	2648	6	2639
2-W	0+25	L	2648	1377	6	510
3-W	0+25	R	1377	251	6	991
4-W	0+25	L	251	3037	6	2213
5-W	1+83	L	3037	1218	6	0
6-W	6+44	R	1218	7018	6	0
7-W	1+61	R	7018	991	6	0
8-W	1+61	R	991	2213	6	0
9-W	7+74	R	2213	0	6	0
<b>TOTAL</b>			<b>4991</b>	<b>11,524</b>	<b>6968</b>	

Item No	Station	MONUMENT BOX ASSEMBLY	
		TYPE	MONUMENT BOX
1-M	0+00	A	B
5-M	13+26	-	-
<b>TOTAL</b>		<b>1</b>	<b>1</b>

PLAN & PROFILE CHESTER AVE. E 24<sup>TH</sup> ST. TO E. 30<sup>TH</sup> ST.

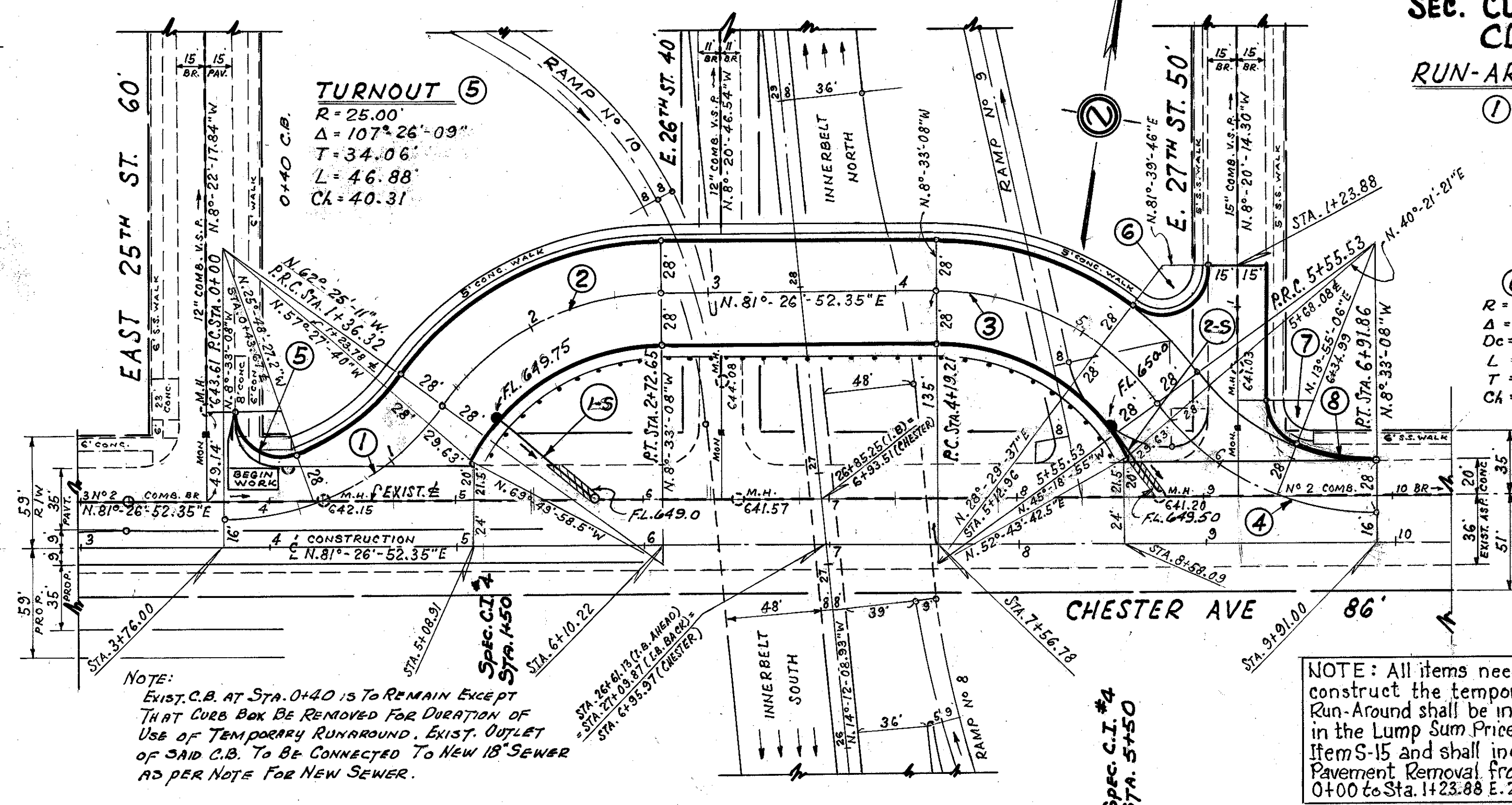
**TYPICAL SECTION RUNAROUND**

SCALE: 1/8"=1'-0" HOR. - 1/4"=1'-0" VER.



NOTE: For Plan & Profile of Chester Ave and utility Locations. See Sheet No 30

B.M. Cross, S.E. Cor. Stone Step  
Emergency Ent. Chester Ave Clinic  
#2501 Chester. Elev. 655.933



**① ② ③ ④**

R = 145.00'  
Δ = 53°-52'-03"  
Dc = 39°-30'-52"  
T = 73.67'  
L = 136.32'  
CA = 131.36'

**⑥ TURNOUTS ⑦**

R = 25.00'      R = 25.00'  
Δ = 126°-49'-23"      Δ = 67°-44'-40"  
Dc = 229°-10'-53"      Dc = 229°-10'-53"  
L = 55.34'      L = 29.56'  
T = 49.70'      T = 16.78'  
CA = 44.71'      CA = 27.87'

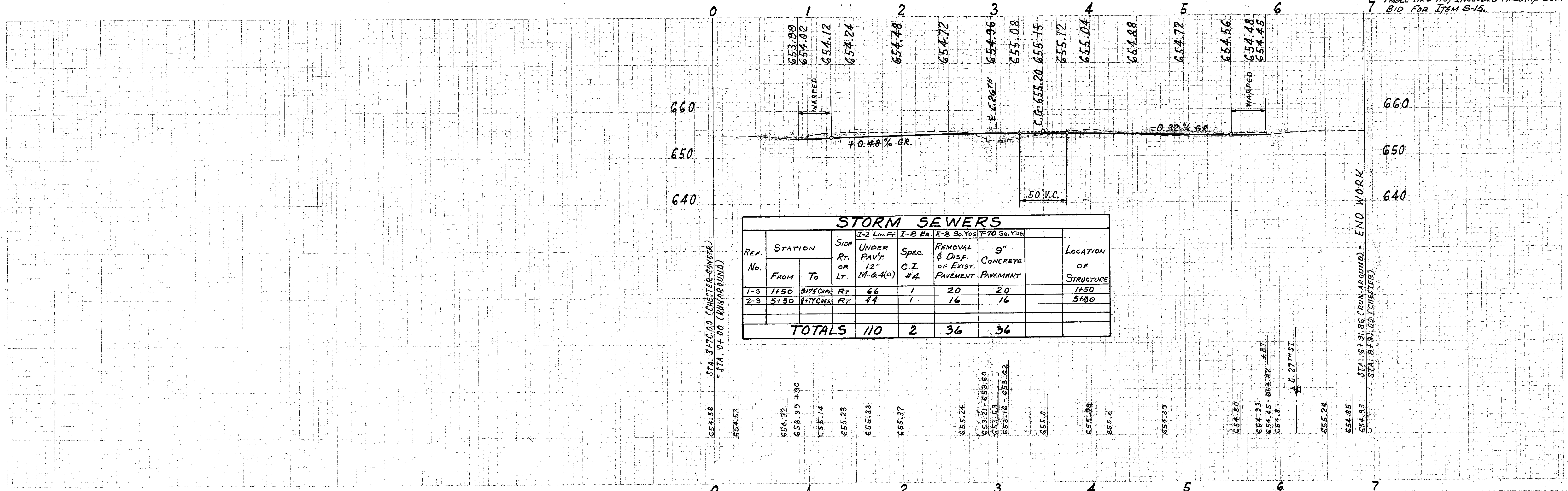
**⑧**

R = 117.00'  
Δ = 22°-28'-14"  
T = 23.24'  
L = 45.89'  
CA = 45.59'

NOTE: All items needed to construct the temporary Run-Around shall be included in the Lump Sum Price for Item S-15 and shall include Pavement Removal from Sta. 0+00 to Sta. 1+23.88 E. 27th St.

NOTE: EXIST. C.B. AT STA. 0+40 IS TO REMAIN EXCEPT THAT CURB BOX BE REMOVED FOR DURATION OF USE OF TEMPORARY RUNAROUND. EXIST. OUTLET OF SAID C.B. TO BE CONNECTED TO NEW 18" SEWER AS PER NOTE FOR NEW SEWER.

STORM SEWER ITEMS IN STORM SEWER TABLE ARE NOT INCLUDED IN LUMP SUM BID FOR ITEM S-15.

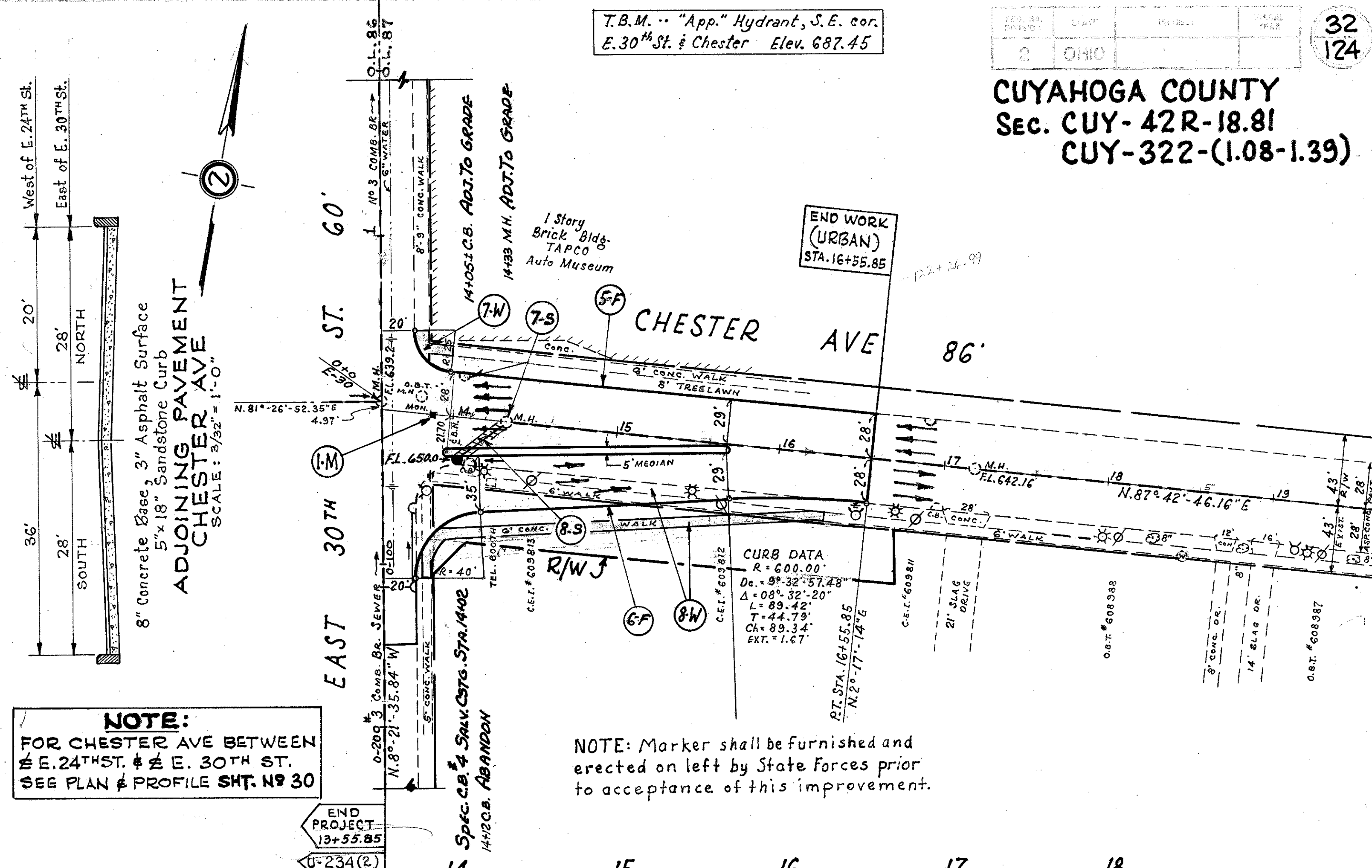
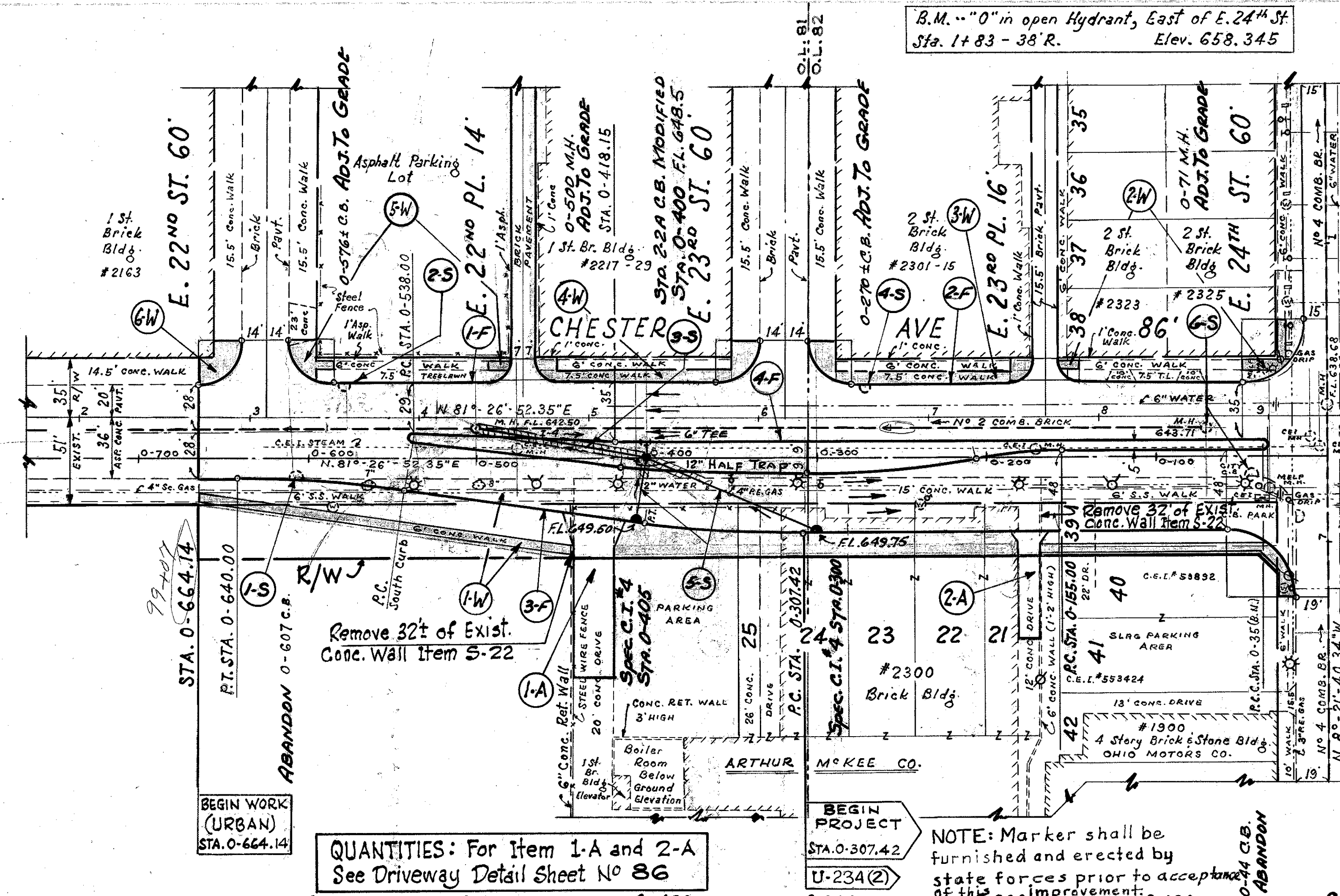


**STORM SEWERS**

REF. No.	STATION		SIDE	I-2 LIN. FT.		I-8 EA. E-B Sq. Yds		T-70 Sq. Yds		LOCATION OF STRUCTURE
	FROM	TO		UNDER PAVT. 12" M-GA(a)	SPEC. C.I. #4	REMOVAL & DISP. OF EXIST. PAVEMENT	9" CONCRETE PAVEMENT			
1-S	1+50	5+75 CHES	RT.	66	1	20	20			1+50
2-S	5+50	8+77 CHES	RT.	44	1	16	16			5+50
<b>TOTALS</b>				<b>110</b>	<b>2</b>	<b>36</b>	<b>36</b>			

PLAN & PROFILE - CHESTER AVE RUN-AROUND





**NOTE:**  
 FOR CHESTER AVE BETWEEN  
 E. 24<sup>TH</sup> ST. & E. 30<sup>TH</sup> ST.  
 SEE PLAN & PROFILE SHT. NO 30

**NOTE:** Marker shall be furnished and  
 erected on left by State Forces prior  
 to acceptance of this improvement.

**QUANTITIES:** For Item 1-A and 2-A  
 See Driveway Detail Sheet No 86

**NOTE:** Marker shall be  
 furnished and erected by  
 state forces prior to acceptance  
 of this improvement.

For Profile Grade See Extra Area Detail Sheet No 45

For Profile Grade See Extra Area Detail Sheet No 46

REF NO	STATION		CURB SHAL-LOW	LIN. FT.	OUTLETS FOR UNDERDRAINS	PIPE SPECIALS
	FROM	TO				
1-F	0-576	0-358	176	42		
2-F	0-270	0-50	178	42		
3-F	0-664	0-59	604			
4-F	0-538	0-155	380	4		
5-F	14+05	16+36	250			
6-F	14+23	16+38	276			
<b>TOTAL</b>			<b>1864</b>	<b>88</b>	<b>1</b>	

Ref No	Station	Side	ITEM E-8		ITEM E-101	TOTAL
			REMOVAL & DISPOSAL OF EXIST. WALK	4" PORTLAND CEMENT CONCRETE WALK		
1-W	0-24	R	538	2	348	
2-W	0-120	R	384	0	348	
3-W	0-292	R	1230	0	1230	
4-W	0-468	R	1218	0	1218	
5-W	0-492	R	369	0	369	
6-W	0-640	R	382	0	382	
7-W	13+65.5	L	214	0	214	
8-W	13+84.5	R	1718	0	1548	
<b>TOTAL</b>			<b>11,497</b>	<b>0</b>	<b>11,500</b>	

Street	Station	Side	ITEM E-8		ITEM E-101	
			REMOVAL & DISPOSAL OF EXIST. DRIVE PAVT.	SR. YDS.	EMBANK. TO REPLACE PAVT.	CU. YDS.
Chester	0-80	R	9	2		
Chester	0-120	R	9	2		
Chester	0-328	L	65			
<b>TOTAL</b>			<b>83</b>	<b>4</b>		

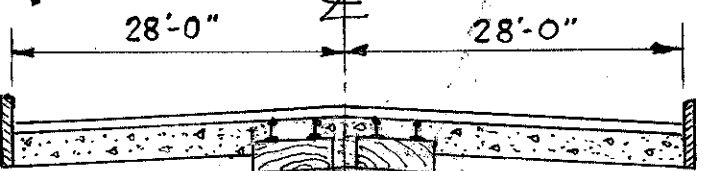
Item No	Station	MONUMENT BOX ASSEMBLY		MONUMENT BOX	
		TYPE	TYPE	TYPE	TYPE
1-M	13+86.02	-	-	-	1
<b>TOTAL</b>					<b>1</b>

Ref No	STATION		SIDE	ITEM E-8		ITEM E-101	TOTAL
	FROM	TO		REMOVAL & DISPOSAL OF EXIST. UNDERPAV. HALF-TRAP 12" CL "B"	9" CONGR. PAVT.		
1-S	0-607	0-576	RT.				
2-S	0-576	0-500	LT.	100			
3-S	0-500	0-400	LT.				
4-S	0-270	0-270	LT.				
5-S	0-405	0-300	RT.	144			
6-S	0-71	0-44	R&L				
7-S	14+05	14+33	LT.				
8-S	14+02	14+33	RT.	34			
<b>TOTAL</b>			<b>278</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>3</b>

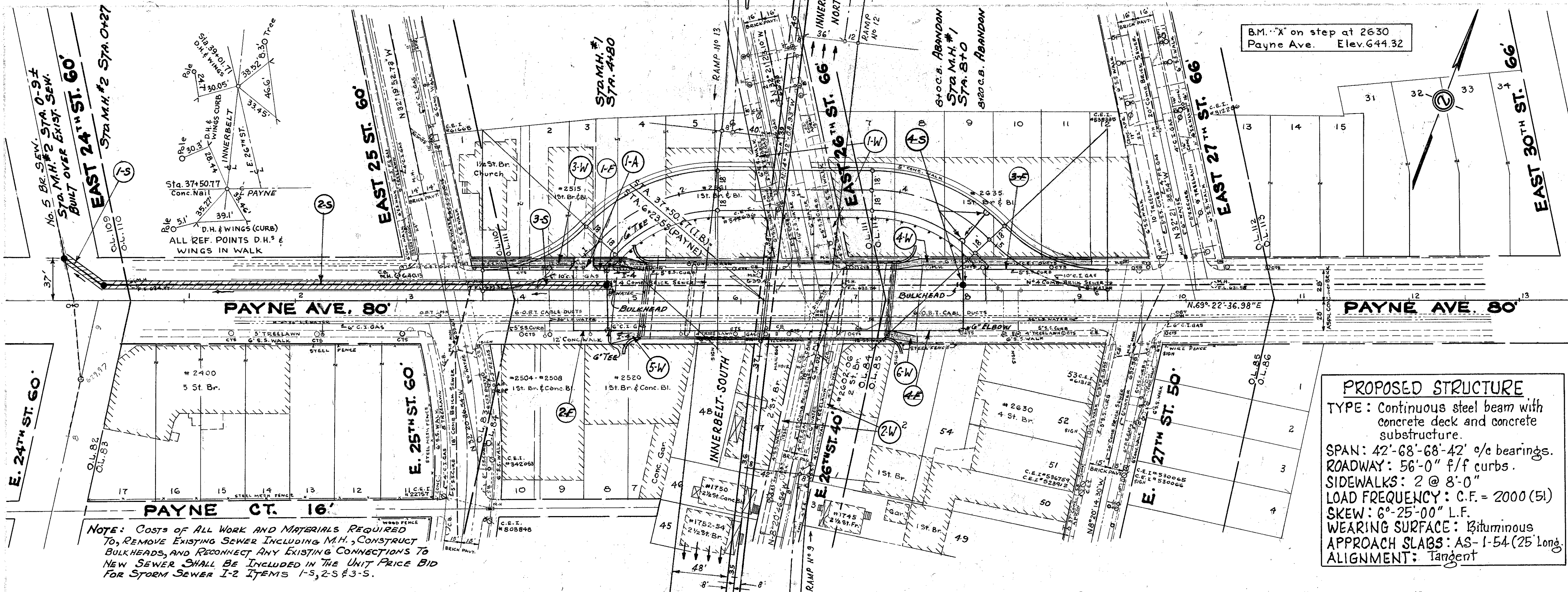
EXCAVATION 4,013 Cu.Yds.  
 EMBANKMENT 146 Cu.Yds.  
 EMBANKMENT +22% 178 Cu.Yds.

EXCAVATION 1,769 Cu.Yds.  
 EMBANKMENT 82 Cu.Yds.  
 EMBANKMENT +22% 100 Cu.Yds.

CUYAHOGA COUNTY  
CUY-42R 18.81  
CUY-322-(108-1.39)



8" Concrete Base with 3" Asphalt Surface with Car Tracks underneath - 5" x 18" Sandstone Curb.  
**ADJOINING PAVEMENT PAYNE AVE**  
Scale: 1/16" = 1'-0" Hor. 1/4" = 1'-0" Vert.



**PROPOSED STRUCTURE**  
TYPE: Continuous steel beam with concrete deck and concrete substructure.  
SPAN: 42'-68'-68'-42' o/c bearings.  
ROADWAY: 56'-0" f/f curbs.  
SIDEWALKS: 2 @ 8'-0"  
LOAD FREQUENCY: C.F. = 2000 (51)  
SKEW: 6°-25'-00" L.F.  
WEARING SURFACE: Bituminous  
APPROACH SLABS: AS-1-54 (25' Long)  
ALIGNMENT: Tangent

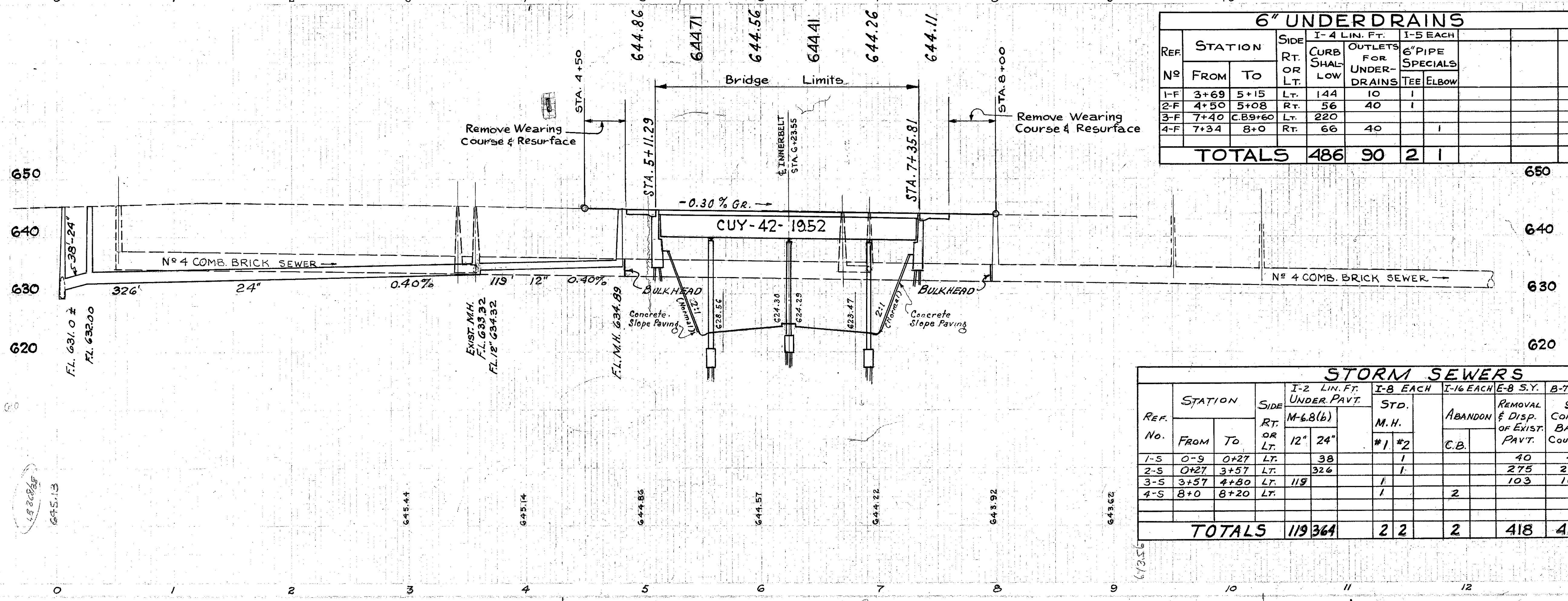
**NOTE:** COSTS OF ALL WORK AND MATERIALS REQUIRED TO REMOVE EXISTING SEWER INCLUDING M.H., CONSTRUCT BULKHEADS, AND RECONNECT ANY EXISTING CONNECTIONS TO NEW SEWER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR STORM SEWER I-2 ITEMS 1-3, 2-S & 3-S.

Ref. No	Station	Side of or of	ITEM E-8		ITEM I-13		
			Removal of Exst. Walk	Removal of Exst. Walk	4" Portland Cement Concrete Walk	4" Portland Cement Concrete Walk	
1-W	0+39	L	146	142			
2-W	8+75	L-R	1306	1306			
3-W	3+57	L	445	400	6'	878	
4-W	4+82	L	886	886	6'	1076	
5-W	4+84	R	1720	Var.		244	
6-W	6+86	R	707	Var.		244	
<b>TOTAL</b>						<b>7261</b>	<b>2442</b>

REF. NO	STATION		SIDE RT. OR LT.	I-4 LIN. FT.		I-5 EACH	
	FROM	TO		CURB SHAL. LOW	OUTLETS FOR UNDER-DRAINS	TEE	ELBOW
	1-F	3+69		5+15	Lt.	144	10
2-F	4+50	5+08	Rt.	56	40	1	
3-F	7+40	C.B. 9+60	Lt.	220			
4-F	7+34	8+0	Rt.	66	40		
<b>TOTALS</b>				<b>486</b>	<b>90</b>	<b>2</b>	<b>1</b>

Street	Station		Side of or of	ITEM E-8	
	From	To		Removal of Exst. Driveway Pavts.	Removal of Exst. Driveway Pavts.
	E. 26	8+35		9+18	L
E. 26	8+38	9+07	R	3.5	
<b>TOTAL</b>				<b>13</b>	

QUANTITIES: For Item 1-A See Driveway Details Sheet No 89

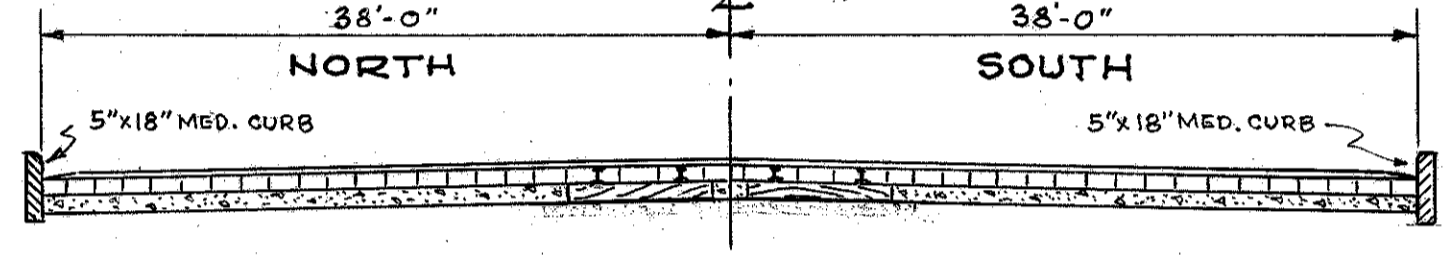
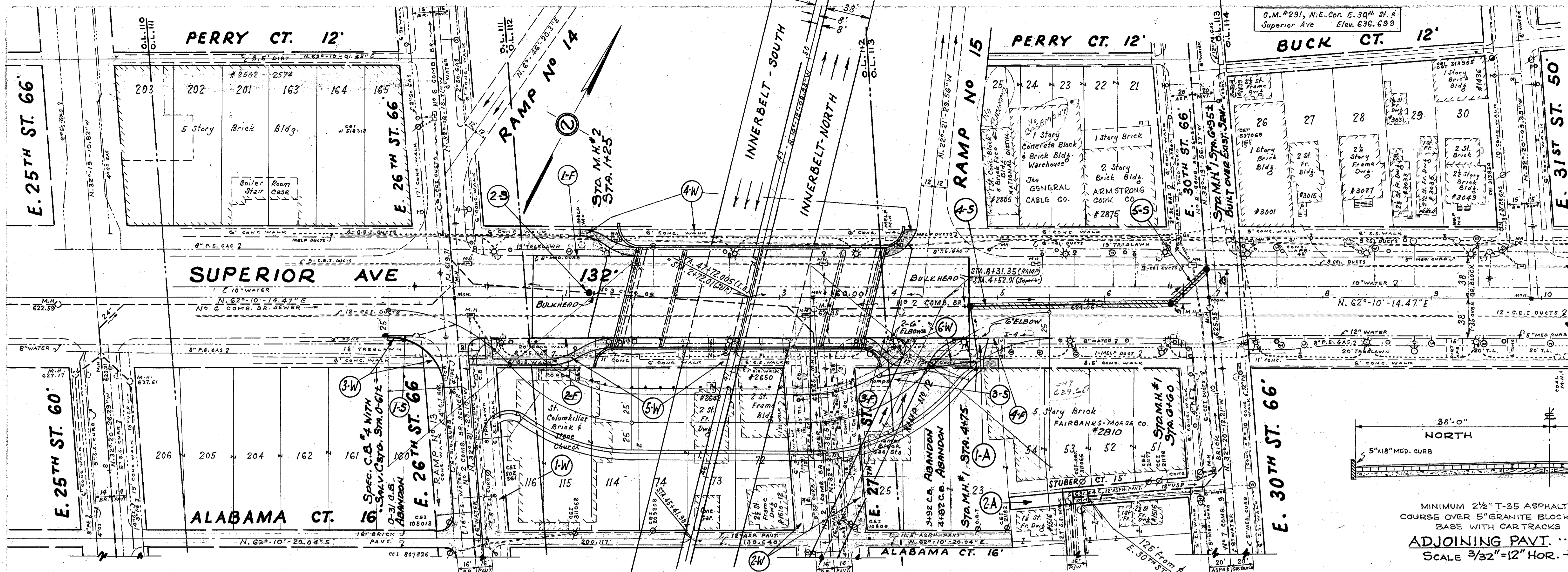


REF. NO	STATION		SIDE RT. OR LT.	I-2 LIN. FT. UNDER PAVT.		STD. M.H.	I-8 EACH	I-16 EACH	I-8 S.Y.	B-70 S.Y.	7-35 C.Y.	LOCATION OF STRUCTURE
	FROM	TO		M-6.8(b)								
	1-S	0+9		0+27	Lt.							
2-S	0+27	3+57	Lt.	326		1			275	275	19.1	0+27
3-S	3+57	4+80	Lt.	119		1			103	103	7.1	4+80
4-S	8+0	8+20	Lt.			1		2				2880: 8120
<b>TOTALS</b>				<b>119364</b>		<b>2</b>	<b>2</b>	<b>2</b>	<b>418</b>	<b>418</b>	<b>29.0</b>	

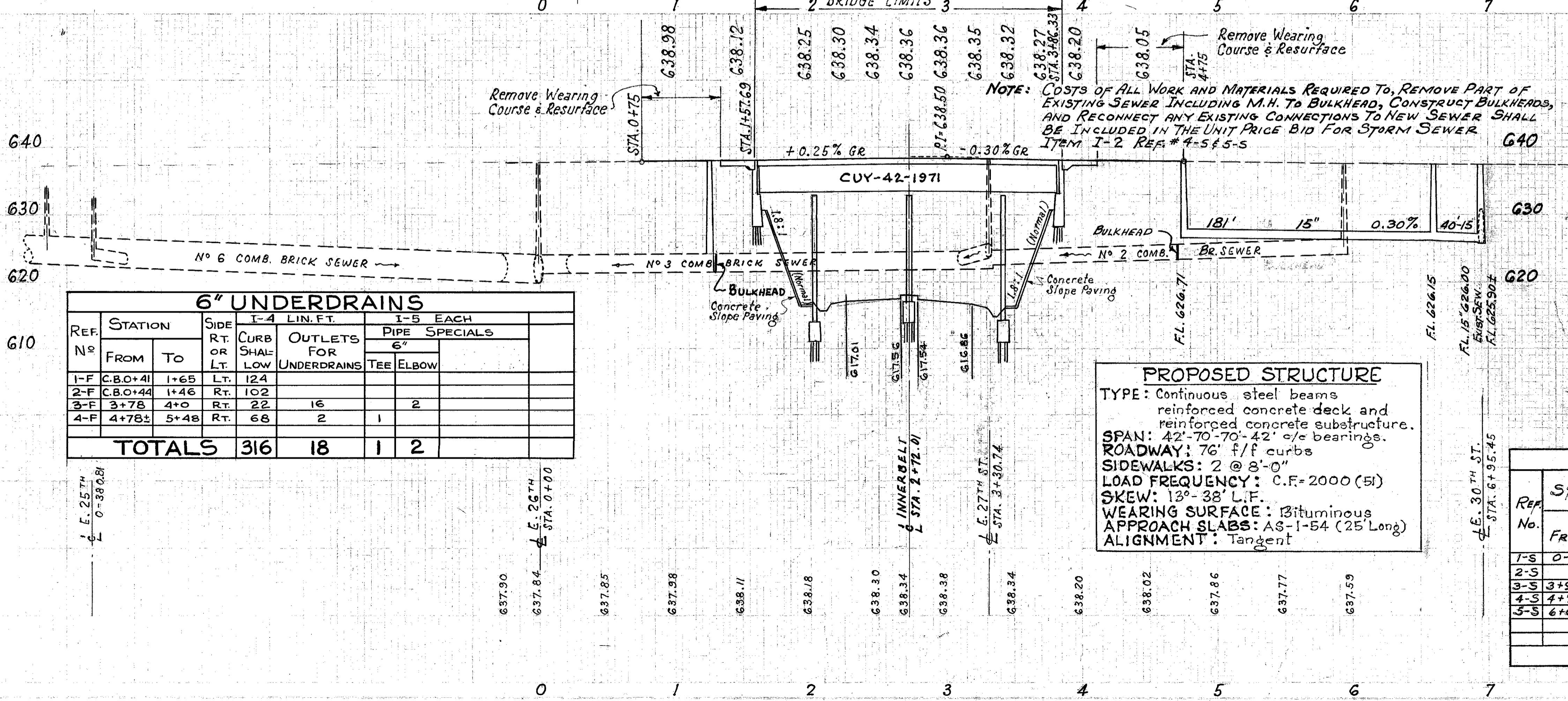
PLAN & PROFILE PAYNE AVE E. 24<sup>TH</sup> ST. to E. 30<sup>TH</sup> ST.



CUYAHOGA COUNTY  
SEC. CUY-42R-18.81  
CUY-322-(1.08-1.39)



MINIMUM 2 1/2" T-35 ASPHALTIC CONC. SURFACE COURSE OVER 5" GRANITE BLOCK PAVT. 6" CONCRETE BASE WITH CAR TRACKS UNDER T-35.  
ADJOINING PAVT. - SUPERIOR AVE  
SCALE 3/32" = 12" HOR. - NO SCALE VERT.



NOTE: COSTS OF ALL WORK AND MATERIALS REQUIRED TO REMOVE PART OF EXISTING SEWER INCLUDING M.H. TO BULKHEAD, CONSTRUCT BULKHEADS, AND RECONNECT ANY EXISTING CONNECTIONS TO NEW SEWER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR STORM SEWER ITEM I-2 REF # 4-5 & 5-5

QUANTITIES: For Items 1-A and 2-A See Driveway Details. Sheet No 89

REF. NO.	STATION		SIDE RT. OR LT.	I-4 LIN. FT.		I-5 EACH	
	FROM	TO		CURB SHAL. LOW	OUTLETS FOR UNDERDRAINS	PIPE SPECIALS	TEE ELBOW
1-F	C8.0+41	1+65	Lt.	124			
2-F	C8.0+44	1+46	Rt.	102			
3-F	3+78	4+0	Rt.	22	16	2	
4-F	4+78 1/2	5+48	Rt.	68	2	1	2
<b>TOTALS</b>				<b>316</b>	<b>18</b>	<b>1</b>	<b>2</b>

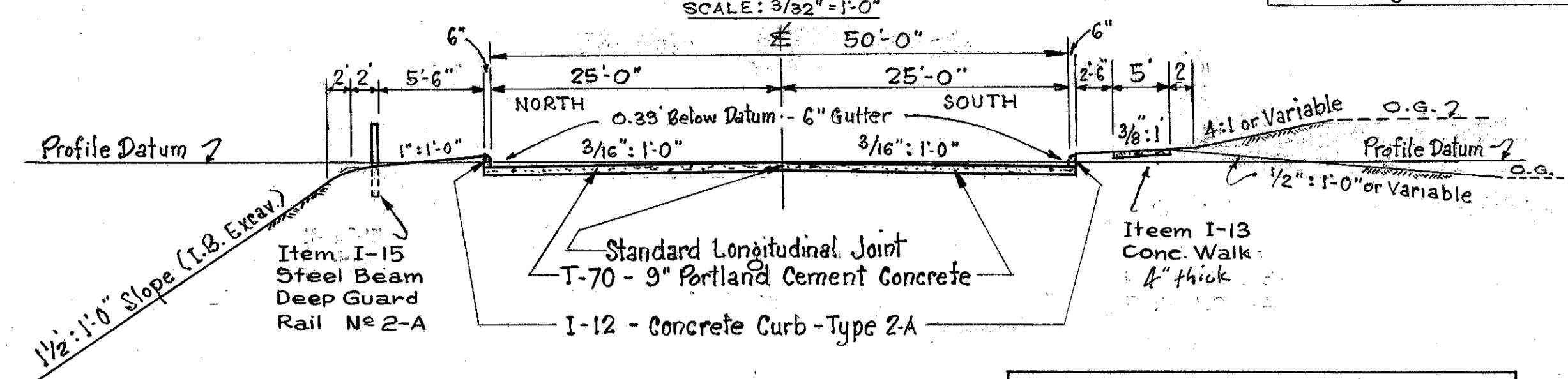
DRIVEWAY QUANTITIES			
Station	Drive Loc. Street	Side of Dr. or Lt.	ITEM E-8 REMOVAL & DISPOSAL OF EXISTING DRIVE PAVT. SQ. YDS
2+18	SUPERIOR	R	25.0
8+91	E. 27	L	12.3
8+83	E. 27	R	14.3
9+54:97A	E. 27	R	17.4
<b>TOTAL</b>			<b>69</b>

**PROPOSED STRUCTURE**  
TYPE: Continuous steel beams reinforced concrete deck and reinforced concrete substructure.  
SPAN: 42'-70'-70'-42' e/e bearings.  
ROADWAY: 76' f/f curbs  
SIDEWALKS: 2 @ 8'-0"  
LOAD FREQUENCY: C.F. 2000 (51)  
SKEW: 13°-38' L.F.  
WEARING SURFACE: Bituminous  
APPROACH SLABS: AS-1-54 (25' Long)  
ALIGNMENT: Tangent

REF. NO.	STATION		SIDE RT. OR LT.	I-2 LIN. FT. UNDER PAVT.		I-8 EACH		I-16 EACH		REMOVAL & DISPOSAL OF EXIST. PAVEMENT	9" CONC. BASE COURSE	2 1/2" ASPH. CONC. SURF. COURSE	LOCATION OF STRUCTURE
	FROM	TO		STD. M.H. #1	STD. M.H. #2	ABANDON C.B.	E-B SQ. YD.	8-10 SQ. YD.	7-35 C.Y.				
1-S	0-61	0-31	Rt.	28									0-61:0-31
2-S		1+25	Lt.			1							1+25
3-S	3+92	4+82	Rt.					2					3+92:4+82
4-S	4+75	6+60	Rt.		181	1			135	135	9.5		4+75
5-S	6+60	6+75	R&L	40		2			35	35	2.5		6+60:6+95
<b>TOTALS</b>				<b>28</b>	<b>221</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>170</b>	<b>170</b>	<b>12.0</b>	

REF. NO.	SIDE	STATION	FROM	TO	ITEM I-13 4" PORTLAND CEMENT CONC. WALK SQ. FT.	ITEM E-8 REMOVAL & DISPOSAL OF EXISTING DRIVE PAVT. SQ. YD.	ITEM I-15 17G Var. 659	ITEM I-15 158 Var. 596	TOTAL
									<b>2589</b>
									<b>7493</b>
									<b>TOTAL</b>

**TYPICAL SECTION RUN-AROUND**

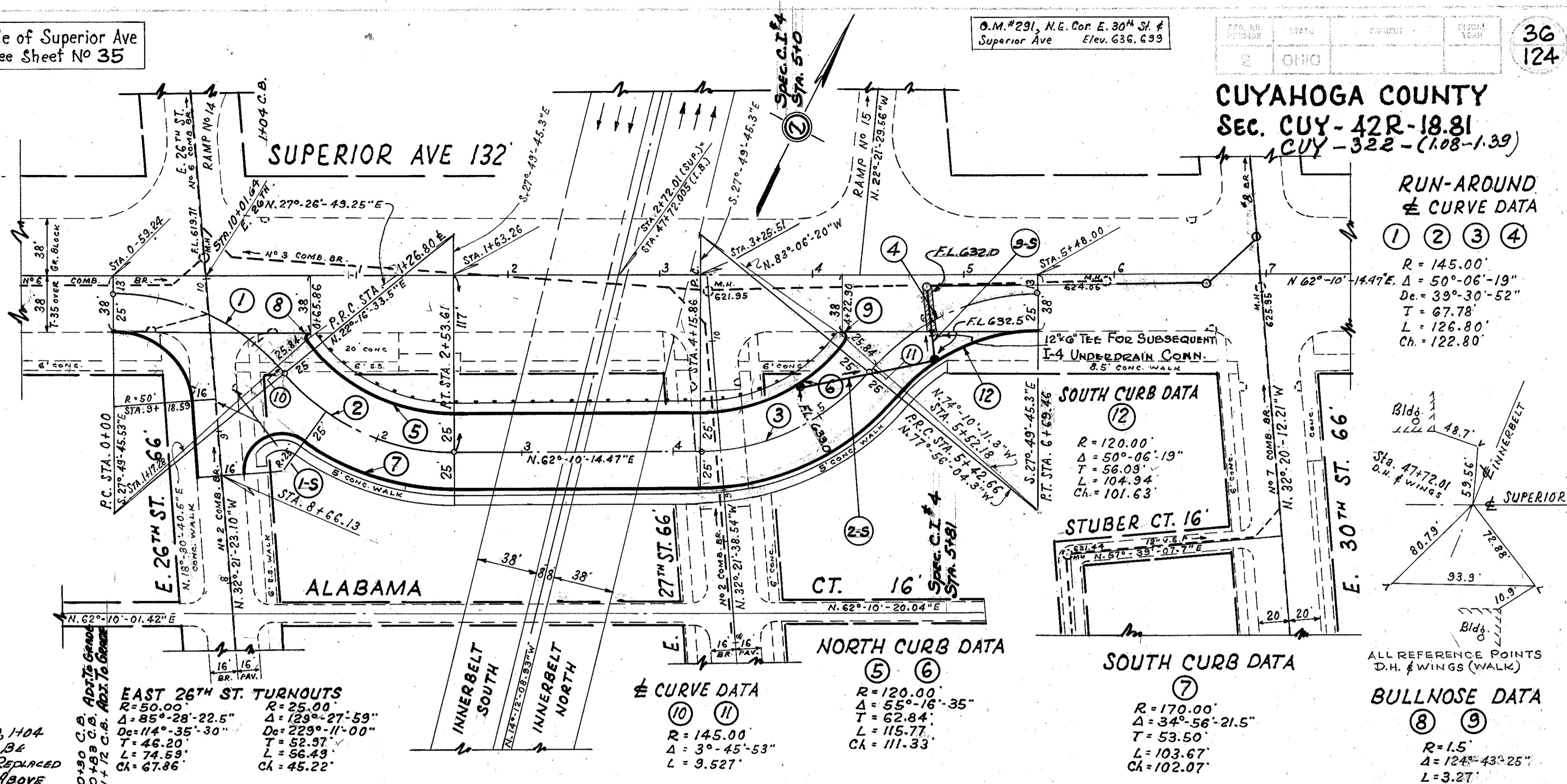


NOTE: For Plan & Profile of Superior Ave and utility Locations. See Sheet No 35

NOTE: All items needed to construct the temporary Run-Around shall be included in the Lump Sum Price for Item S-15 and shall include Pavement Removal from Sta. 8+66.13 to 9+63.52 (E. 26<sup>th</sup> St.) and Sta. 8+90± to 9+65± (E. 27<sup>th</sup> St.)

STORM SEWER ITEMS IN STORM SEWER TABLE ARE NOT TO BE INCLUDED IN LUMP SUM BID FOR ITEM S-15.

NOTE: CITY OF CLEVELAND (Spec. C.B. #4) Type C.B. 3<sup>rd</sup> Sym. 0130, 1H04 AND 1+12 ARE TO REMAIN, EXCEPT THAT CURB BOXES BE REMOVED. CURB BOX FOR C.B. AT STA. 1H04 TO BE REDUCED AFTER TEMPORARY ROAD IS REMOVED. COST OF ABOVE TO BE INCLUDED IN THE LUMP SUM BID FOR ITEM S-15.



**RUN-AROUND & CURVE DATA**

Curve No.	Stationing	R	Δ	T	L	Ch
1	Sta. 5+48.00	145.00'	50°06'-19"	67.78'	126.80'	122.80'
2	Sta. 6+63.52	120.00'	50°06'-19"	56.09'	104.94'	101.63'
3	Sta. 8+63.52	120.00'	55°16'-35"	62.84'	115.77'	111.33'
4	Sta. 9+63.52	170.00'	34°56'-21.5"	53.50'	103.67'	102.07'

**SOUTH CURB DATA**

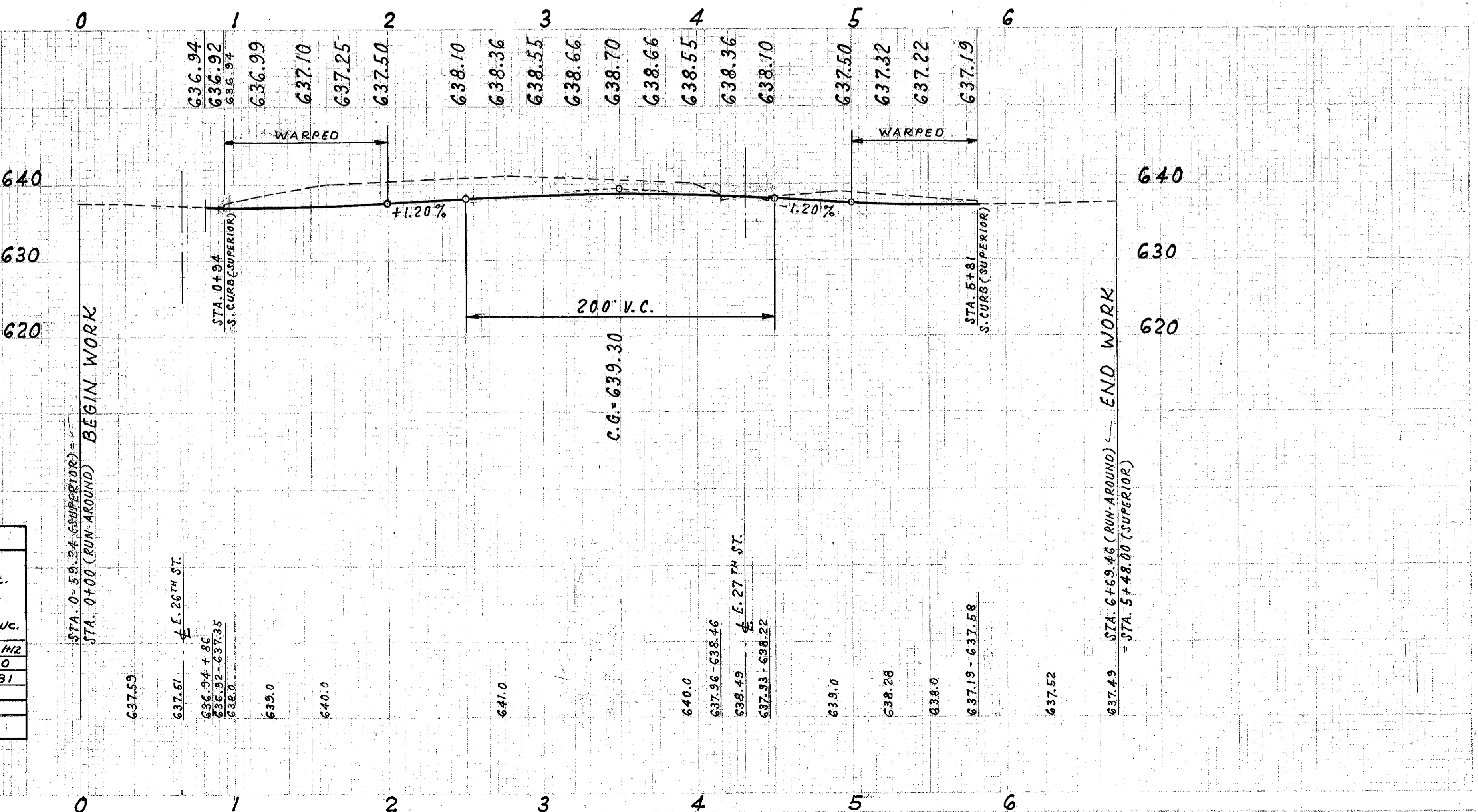
**STUBER CT. 16'**

**NORTH CURB DATA**

**SOUTH CURB DATA**

**BULLNOSE DATA**

ALL REFERENCE POINTS D.H. & WINGS (WALK)



**STORM SEWERS**

REQ No.	STATION		SIDE RT OR LT	I-2 LIM. FT.		Spec. C.I. #4	C.B. ADJUST. GRADE	REMOVAL & DISP. OF EXIST. PAVT.	9" CONCR. BASE COURSE	2 1/2" ASPH. CONCRETE SURFACE COURSE	PIPE SPECIM. 12"x6" M-64(a)	Loc. OF STRUC.
	FROM	TO		UNDER PAVEMENT 12" M-G-A(G)	I-8 EACH							
1-S	0+83	1+12	RT.			1	2					0+83:1H2
2-S	5+0	5+81	R&L			1		20	20	1.4	1	5+0
3-S	5+81	6+07	R&L			1		20	20	1.4	1	5+81
<b>TOTALS</b>				<b>134</b>	<b>2</b>	<b>2</b>	<b>20</b>	<b>20</b>	<b>1.4</b>	<b>1</b>		

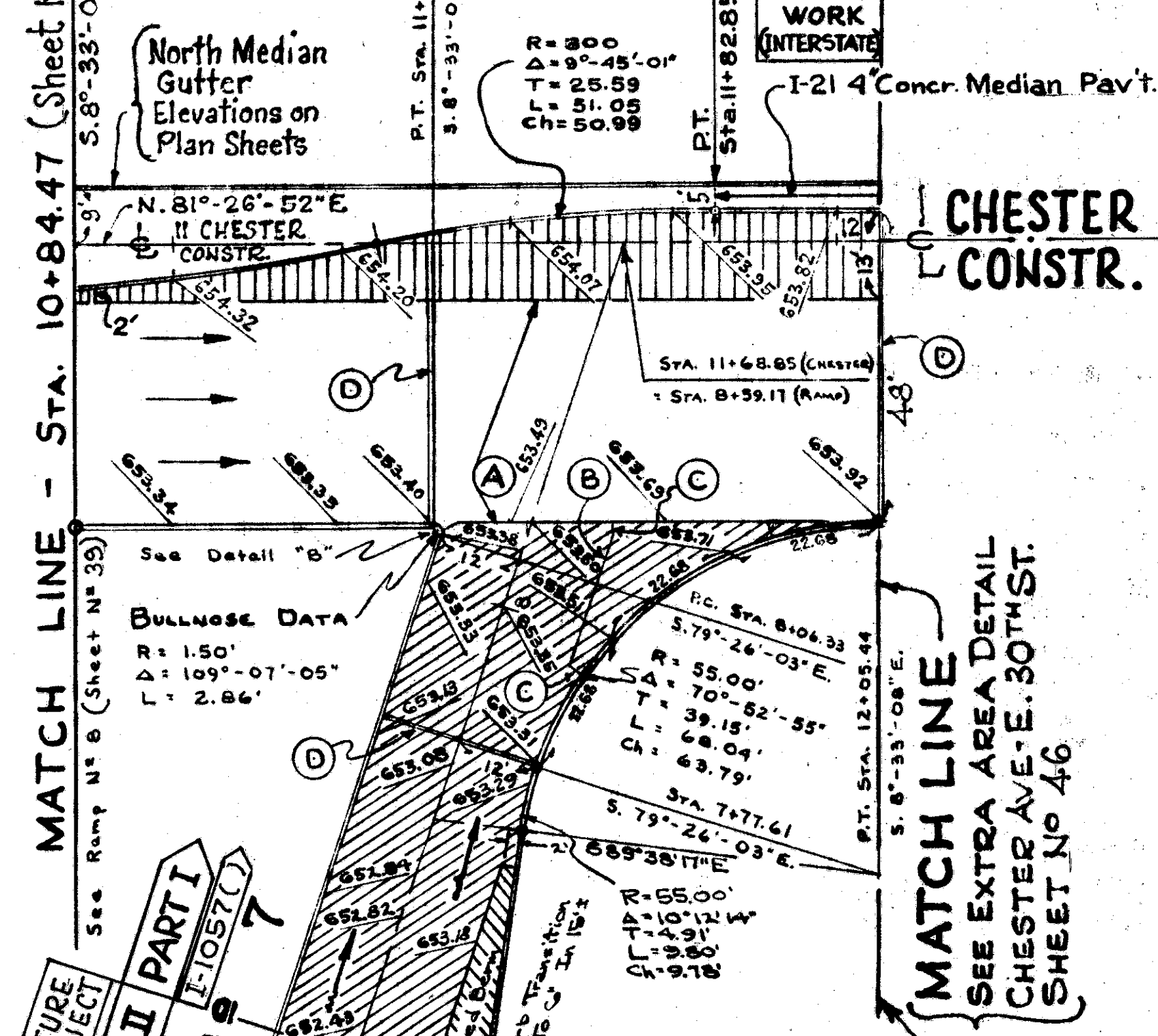
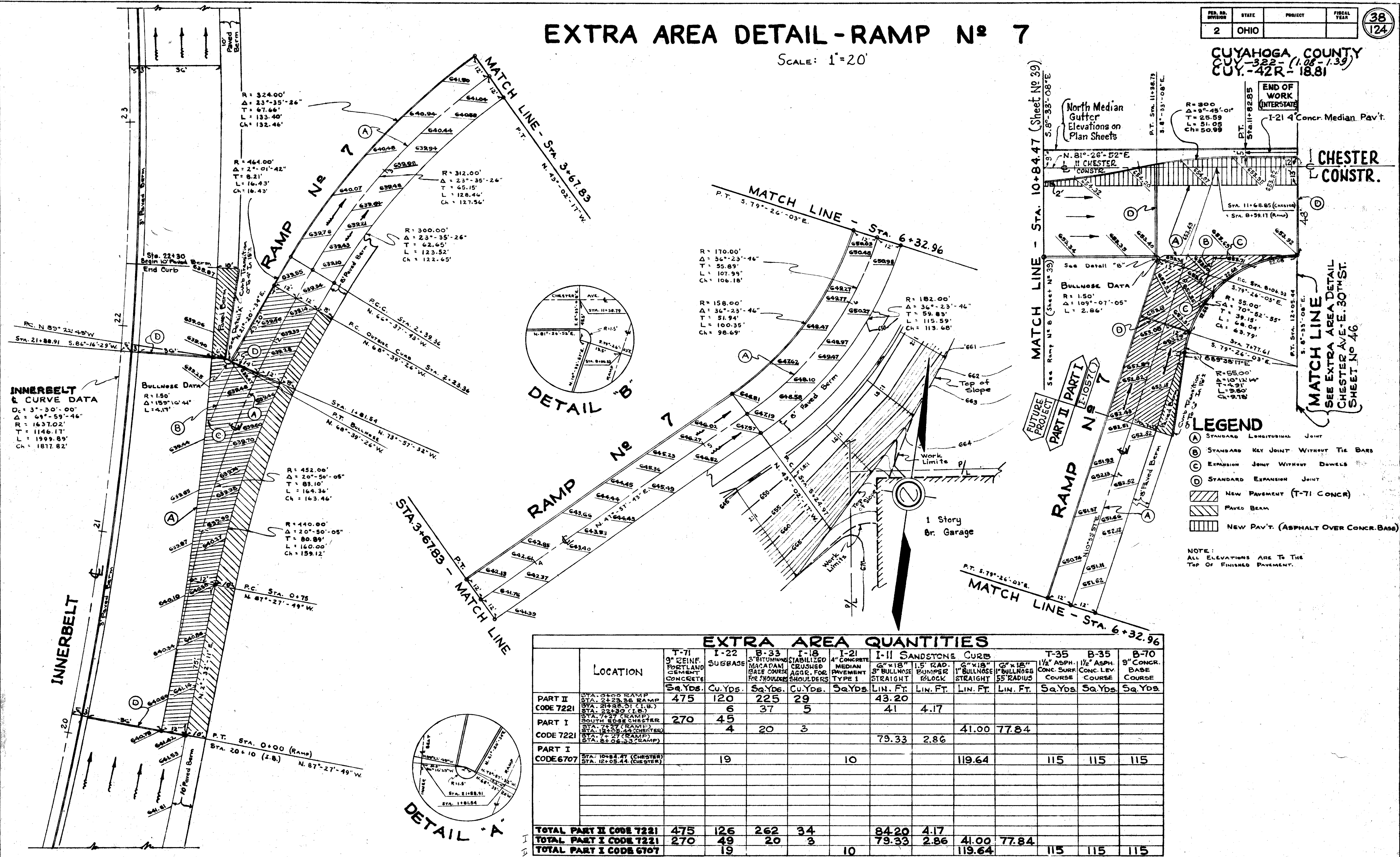
**PLAN & PROFILE - SUPERIOR AVE RUN-AROUND**



# EXTRA AREA DETAIL - RAMP No 7

SCALE: 1"=20'

CUYAHOGA COUNTY  
CUY-322-(1.08-1.39)  
CUY-42R-18.81



- ### LEGEND
- (A) STANDARD LONGITUDINAL JOINT
  - (B) STANDARD KEY JOINT WITHOUT TIE BARS
  - (C) EXPANSION JOINT WITHOUT DOWELS
  - (D) STANDARD EXPANSION JOINT
  - [Hatched Box] NEW PAVEMENT (T-71 CONCR)
  - [Dotted Box] PAVED BERM
  - [Horizontal Lines Box] NEW PAV'T. (ASPHALT OVER CONCR. BASE)

NOTE: ALL ELEVATIONS ARE TO THE TOP OF FINISHED PAVEMENT.

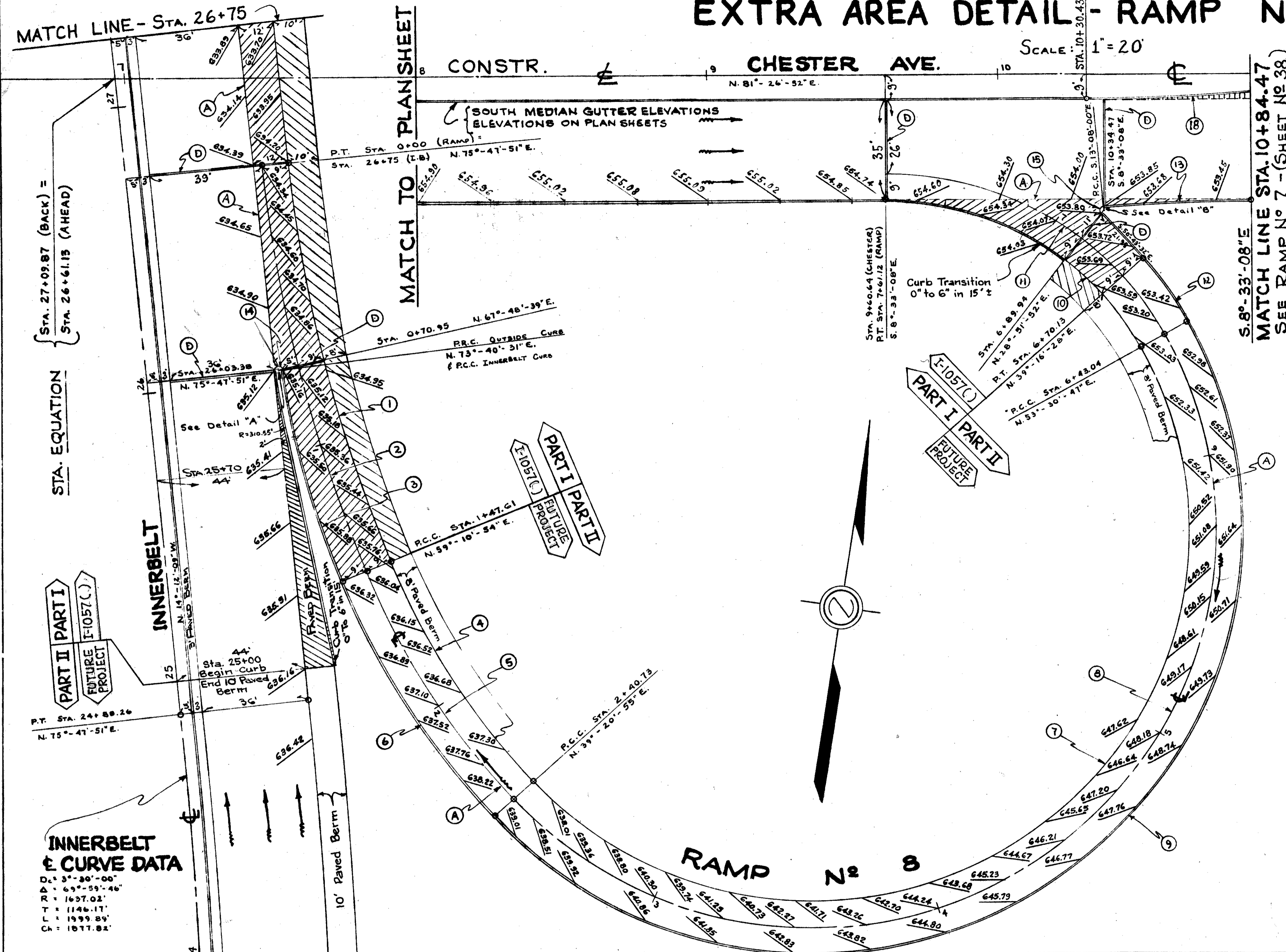
**INNERBELT & CURVE DATA**  
 $D_c = 3^{\circ}-30'-00''$   
 $\Delta = 69^{\circ}-59'-46''$   
 $R = 1637.02'$   
 $T = 1146.17'$   
 $L = 1999.89'$   
 $Ch = 1817.82'$

## EXTRA AREA QUANTITIES

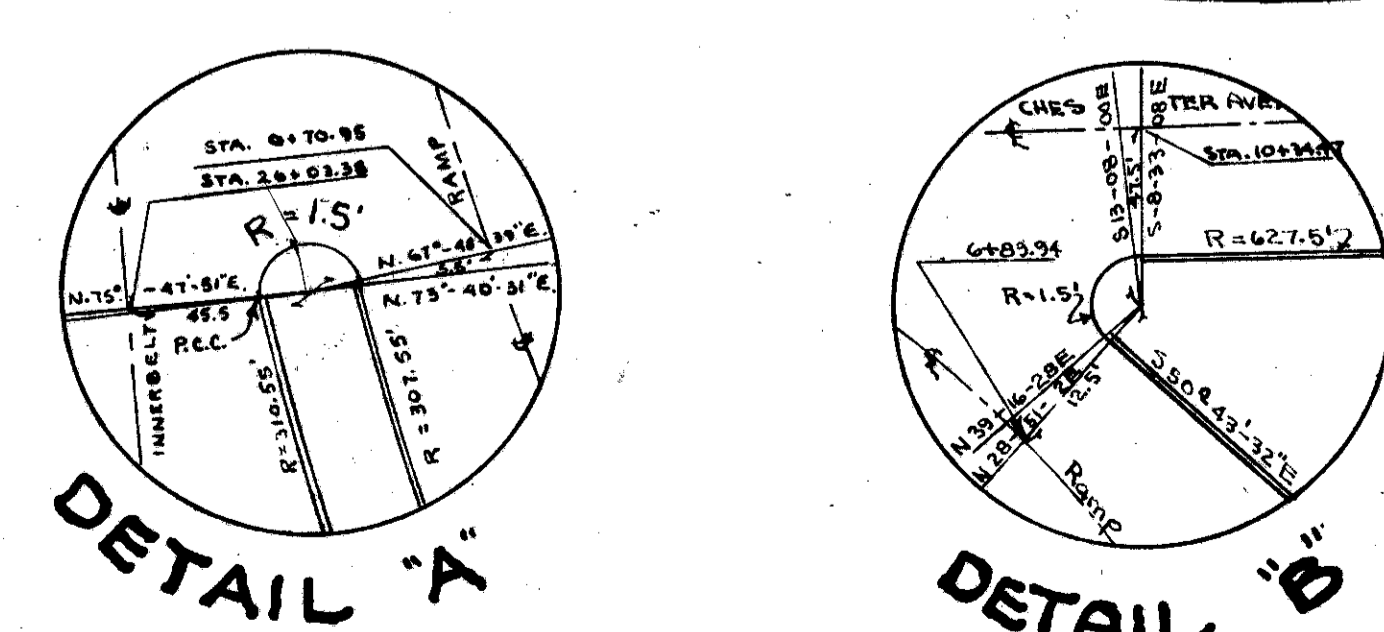
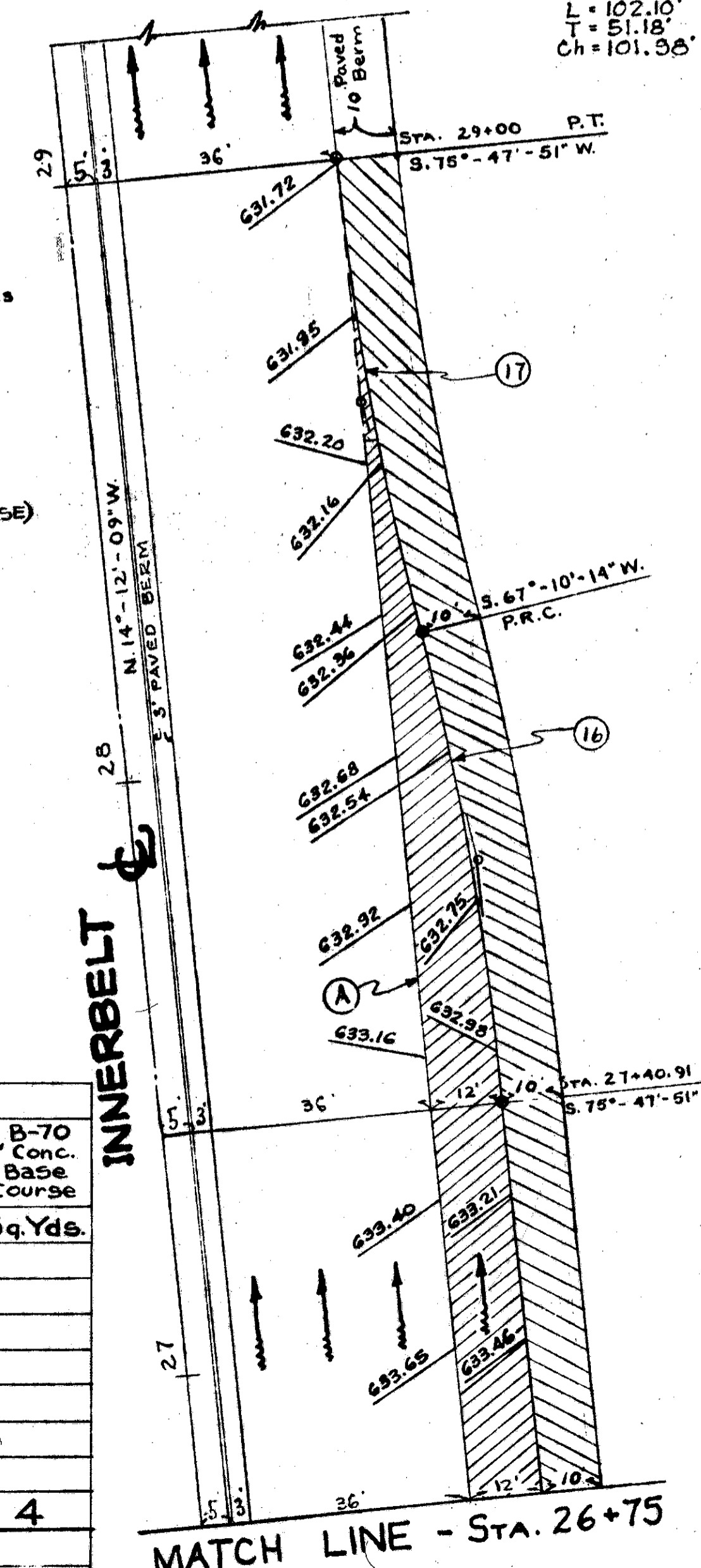
LOCATION	T-71 9" REINF. PORTLAND CEMENT CONCRETE		I-22 SUBBASE		B-33 3" BITUMINOUS MACADAM BASE COURSE FOR SHOULDERS		I-18 STABILIZED CRUSHED AGGR. FOR SHOULDERS		I-21 4" CONCRETE MEDIAN PAVEMENT TYPE I		I-11 SANDSTONE CURB				T-35 1 1/2" ASPH. CONC. SURF. COURSE		B-35 1 1/2" ASPH. CONC. LEV. COURSE		B-70 9" CONCR. BASE COURSE
	Sq. Yds.	Cu. Yds.	Sq. Yds.	Cu. Yds.	Sq. Yds.	Cu. Yds.	Sq. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.			
PART II CODE 7221 STA. 0+00 RAMP STA. 2+23.36 RAMP STA. 2+88.91 (I.B.)	475	120	225	29			43.20												
PART I CODE 7221 STA. 2+27 (RAMP) STA. 7+27 (CHESTER) STA. 12+05.44 (CHESTER)	270	45	37	5			41	4.17			41.00	77.84							
PART I CODE 6707 STA. 10+84.47 (CHESTER) STA. 12+05.44 (CHESTER)		19					10			119.64			115	115		115			
<b>TOTAL PART II CODE 7221</b>	<b>475</b>	<b>126</b>	<b>262</b>	<b>34</b>			<b>84.20</b>	<b>4.17</b>											
<b>TOTAL PART I CODE 7221</b>	<b>270</b>	<b>49</b>	<b>20</b>	<b>3</b>			<b>79.33</b>	<b>2.86</b>		<b>41.00</b>	<b>77.84</b>								
<b>TOTAL PART I CODE 6707</b>		<b>19</b>					<b>10</b>			<b>119.64</b>			<b>115</b>	<b>115</b>		<b>115</b>			

# EXTRA AREA DETAIL - RAMP N° 8

CUYAHOGA COUNTY  
 CUY-42R-18.81  
 CUY-322-(1.08-1.39)



① R = 500.00' Δ = 16°-36'-57" T = 73.01' L = 145.00' Ch = 144.44'	② R = 509.00' Δ = 16°-36'-57" T = 74.33' L = 147.09' Ch = 147.09'	③ R = 307.55' Δ = 19°-29'-36" T = 39.11' L = 77.80' Ch = 77.59'	④ R = 240.00' Δ = 19°-49'-59" T = 45.45' L = 90.00' Ch = 89.55'	⑤ R = 269.00' Δ = 19°-49'-59" T = 47.03' L = 93.12' Ch = 92.65'	⑬ R = 109.00' Δ = 62°-03'-55" T = 65.58' L = 118.07' Ch = 112.39'	⑭ R = 150' Δ = 180° L = 4.71'	⑮ R = 150' Δ = 127°-35'-32" L = 3.34'	⑯ (TOTAL) R = 600' Δ = 9°-32'-57.38" T = 9°-45'-01" L = 102.10' Ch = 51.18'
--	--	--	--	--	--	--	--	--



**NOTE:**  
 All Elevations are to the top of finished pavement.

LOCATION	T-71 9" Port Cement Reinfc. Conc. Pavement		I-22 Sub base		B-33 3" Bituminous Macadam Base Course For Shoulders		I-18 Stabilized Crushed Aggr. For Shoulders		I-11 Sandstone Curb			T-35 1 1/2" Asphalt Conc. Surf. Course		B-35 1 1/2" Asphalt Conc. Level Course		B-70 9" Conc. Base Course	
	Sq. Yds.	Cu. Yds.	Sq. Yds.	Cu. Yds.	6"x18" 3" Bullnose	1.5' Bumper Block	6"x18" 1" Bullnose	Sq. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.		
Sta. 29+00 (Inner)																	
Sta. 1+47.61 (Ramp)	508	165	441	56													
Sta. 6+70.13 (Ramp)	112	22	17	2													
Sta. 7+61.12 (Ramp)																	
Sta. 26+103.38 (Inner)	2	10	52	7													
Sta. 0+70.95 (Ramp)									77.80	4.66	104.00						
Sta. 1+47.61 (Ramp)																	
Sta. 6+89.94 (Ramp)																	
Sta. 7+61.12 (Ramp)									21.35	3.34	65.30						
Sta. 8+85.94 (Ramp)																	
Sta. 10+24.47 (Chest)											50.17						
Sta. 10+84.43 (Chest)											56.10	4	4	4			
Sta. 10+84.47 (Chest)											56.10	4	4	4			
<b>TOTAL CODE 7221</b>	<b>622</b>	<b>197</b>	<b>510</b>	<b>65</b>	<b>99.75</b>	<b>8.00</b>	<b>219.47</b>										
<b>TOTAL CODE 6707</b>							<b>56.10</b>										



# EXTRA AREA DETAIL-RAMP No. 9

SCALE: 1"=20'

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

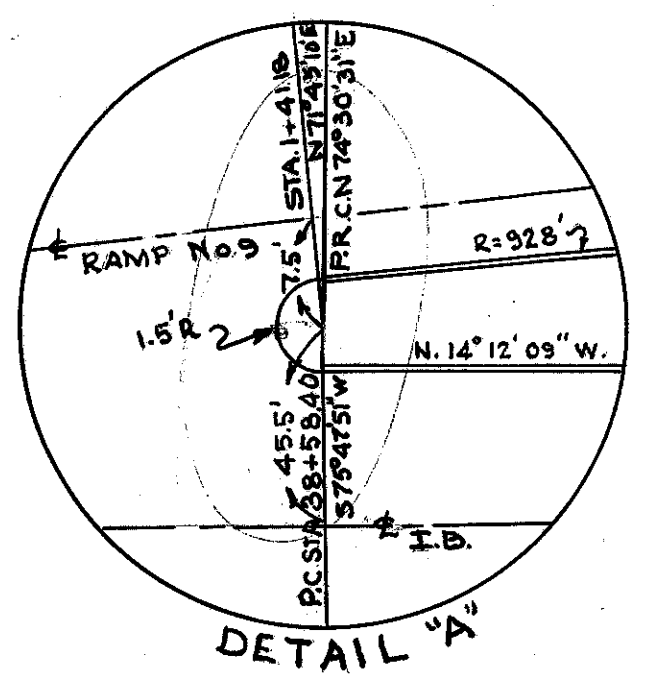
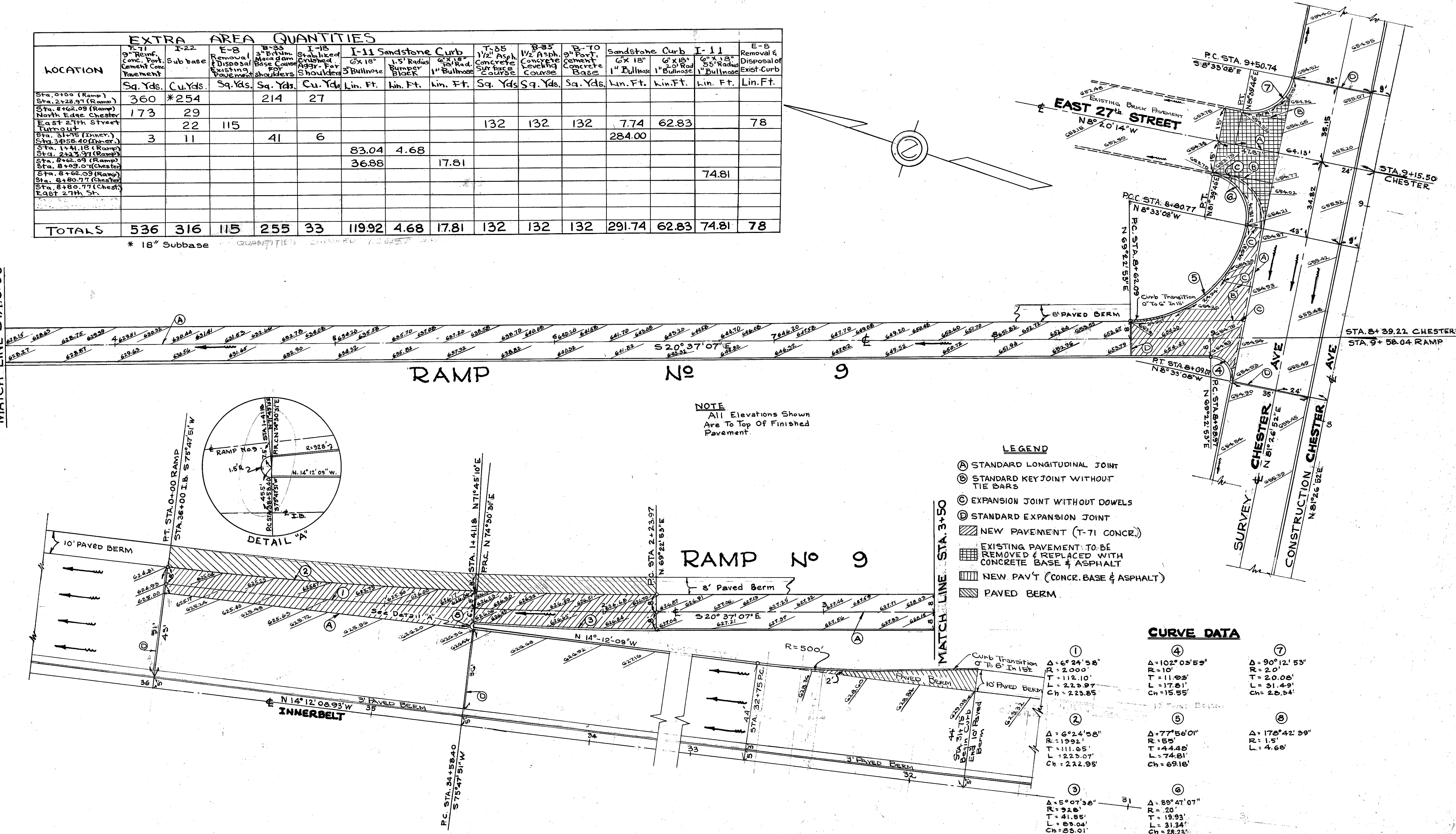
CUY. - 322-1108-139  
CUY. - 42R-18.81  
CUYAHOGA COUNTY

40  
124

LOCATION	T-71		I-22		E-8		I-18		I-11 Sandstone Curb			I-11		E-8	
	Sq. Yds.	Cu. Yds.	Sq. Yds.	Cu. Yds.	Sq. Yds.	Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Lin. Ft.	Lin. Ft.	
Sta. 0+00 (Ramp)	360	*254			214	27									
Sta. 2+23.91 (Ramp)															
Sta. 8+62.09 (Ramp)	173	29													
North Edge Chester															
East 27th Street Turnout			115						132	132	132	7.74	62.83	78	
Sta. 31+75 (Inner)	3	11			41	6						284.00			
Sta. 34+58.40 (Inner)															
Sta. 1+41.18 (Ramp)											83.04	4.68			
Sta. 8+62.09 (Ramp)											36.88	17.81			
Sta. 8+52.09 (Chester)													74.81		
Sta. 8+80.77 (Chester)															
Sta. 8+80.77 (Chester) East 27th St.															
<b>TOTALS</b>	<b>536</b>	<b>316</b>	<b>115</b>	<b>255</b>	<b>33</b>	<b>119.92</b>	<b>4.68</b>	<b>17.81</b>	<b>132</b>	<b>132</b>	<b>132</b>	<b>291.74</b>	<b>62.83</b>	<b>74.81</b>	<b>78</b>

\* 18" Subbase QUANTITIES CHECKED 7.2.65

MATCH LINE STA. 3+50



**NOTE**  
All Elevations Shown Are To Top Of Finished Pavement.

- LEGEND**
- (A) STANDARD LONGITUDINAL JOINT
  - (B) STANDARD KEY JOINT WITHOUT TIE BARS
  - (C) EXPANSION JOINT WITHOUT DOWELS
  - (D) STANDARD EXPANSION JOINT
  - [Hatched] NEW PAVEMENT (T-71 CONCR.)
  - [Grid] EXISTING PAVEMENT TO BE REMOVED & REPLACED WITH CONCRETE BASE & ASPHALT
  - [Diagonal Lines] NEW PAV'T (CONCR. BASE & ASPHALT)
  - [Solid] PAVED BERM

**CURVE DATA**

Curve No.	Angle	Radius	Tangent	Length	Chord
1	6°24'58"	2000'	112.10'	223.97'	223.85'
2	6°24'58"	1992'	111.65'	223.07'	222.95'
3	5°07'58"	2000'	112.10'	223.97'	223.85'
4	102°02'59"	10'	11.93'	15.55'	15.55'
5	77°56'01"	55'	44.48'	74.81'	69.18'
6	89°47'07"	20'	19.93'	31.34'	28.23'
7	90°12'53"	20'	20.08'	31.49'	28.34'
8	176°42'39"	1.5'	4.68'		

# EXTRA AREA DETAIL-RAMP NO 10

LOCATION	EXTRA AREA QUANTITIES (INTERSTATE) I-1057 ( )										
	T-71 9" Portl. Conc. Pavement	I-22 Subbase	B-35 3" Bitum. Macadam Base Course For Shoulders	I-18 Stabilized Crushed Aggregate Shoulders	I-11 Sandstone Curb 6"x18" 3" Bullnose	T-35 1 1/2" Asp. Conc. Surf. Course	B-35 1 1/2" Asp. Conc. Lev. Course	B-70 9" Conc. Base Course	I-21 4" Conc. Median Pavt.		
	Sq. Yds.	Cu. Yds.	Sq. Yds.	Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.
Sta. 0+00 (Ramp)	205	56	123	16							
Sta. 1+23.6 (Ramp)											
Sta. 2+89.42 (Inner)	2	9	45	5		4.71	92.00				
Sta. 2+130 (Inner)											
Sta. 3+14.56 (Conn.)	106	21	17	2							
North Edge Chester											
Sta. 3+14.26 (Conn.)					21.95	3.39					
Sta. 3+34.06 (Conn.)											
Sta. 3+34.06 (Conn.)							65.30				
Sta. 3+05.24 (Conn.)											
Sta. 0+58.60 (Ramp)					66.40						
Sta. 1+23.6 (Ramp)											
Sta. 5+09.06 (Ramp)	290	68	113	15	132.55	4.17					
Sta. 6+36.92 (Conn.)											
Sta. 5+78.31 (Ramp)	223	37			223.24						
Sta. 6+89.93 (Ramp)											
Sta. 1+61.18 (Chester)							164.97	123	123	123	5
Sta. 3+25.42 (Chester)											
<b>TOTAL CODE 6707</b>	<b>23</b>	<b>23</b>					<b>164.97</b>	<b>123</b>	<b>123</b>	<b>123</b>	<b>5</b>
<b>TOTAL CODE 7221</b>	<b>826</b>	<b>191</b>	<b>298</b>	<b>38</b>	<b>444.14</b>	<b>12.27</b>					

SCALE 1"=20'

BEGIN WORK (INTERSTATE)  
END WORK (URBAN)

CUY - 42R-18.81  
CUY - 322-(1.08-1.39)  
CUYAHOGA COUNTY

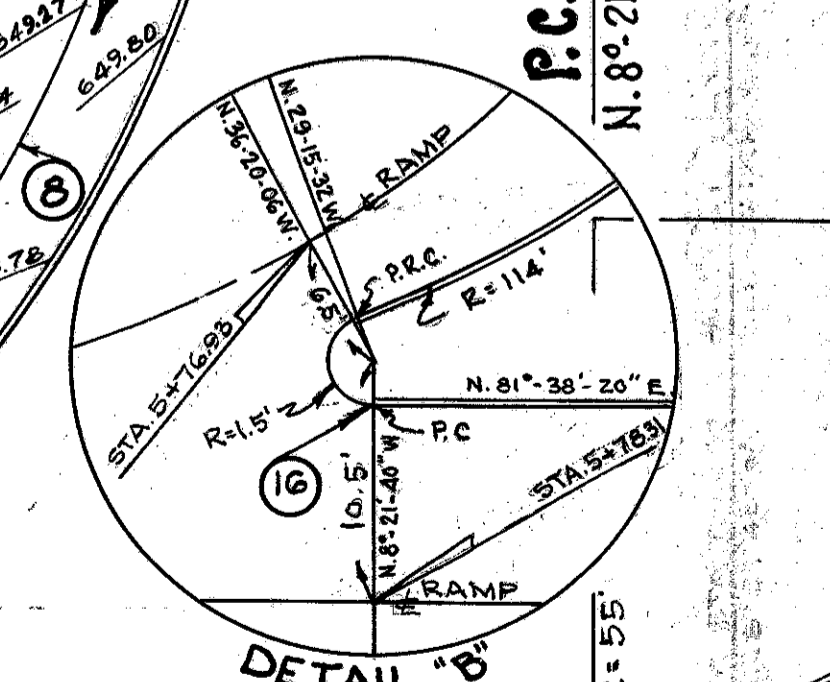
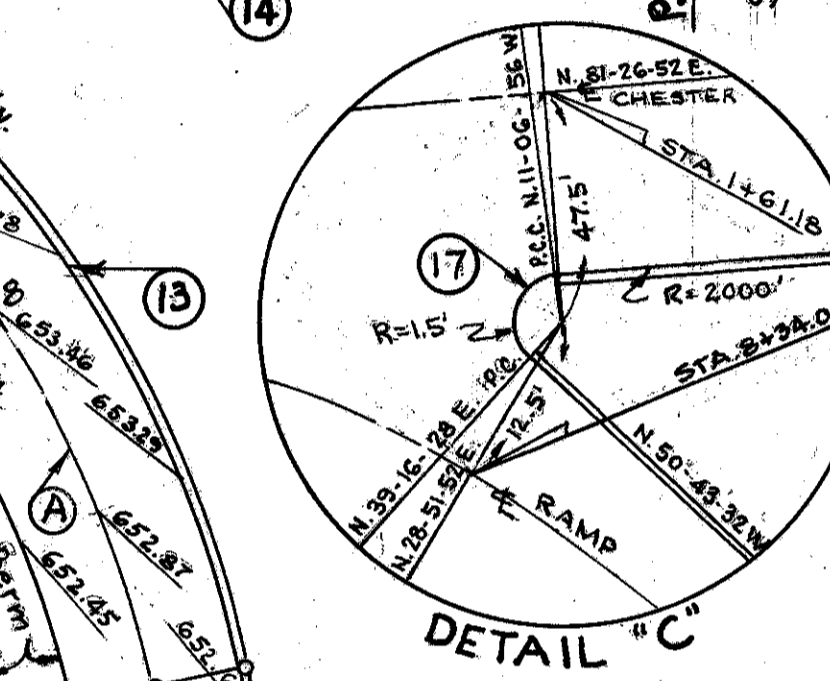
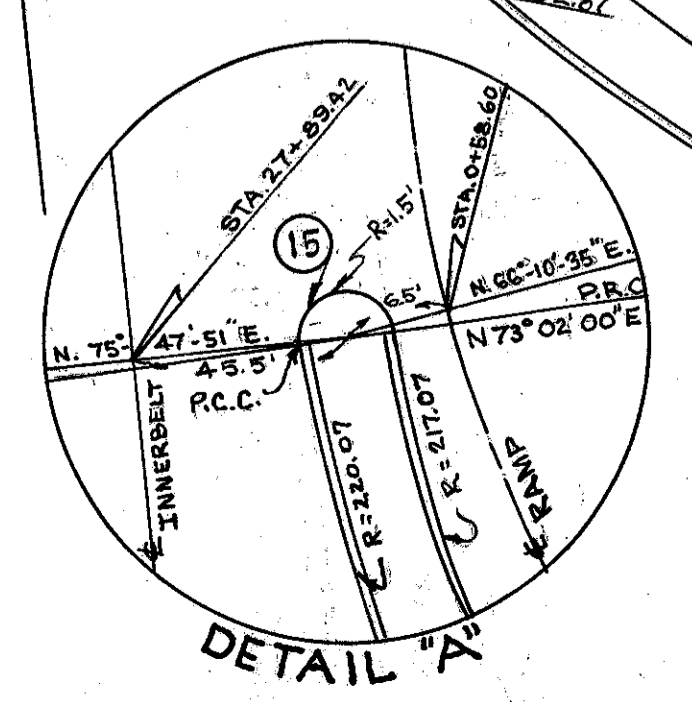
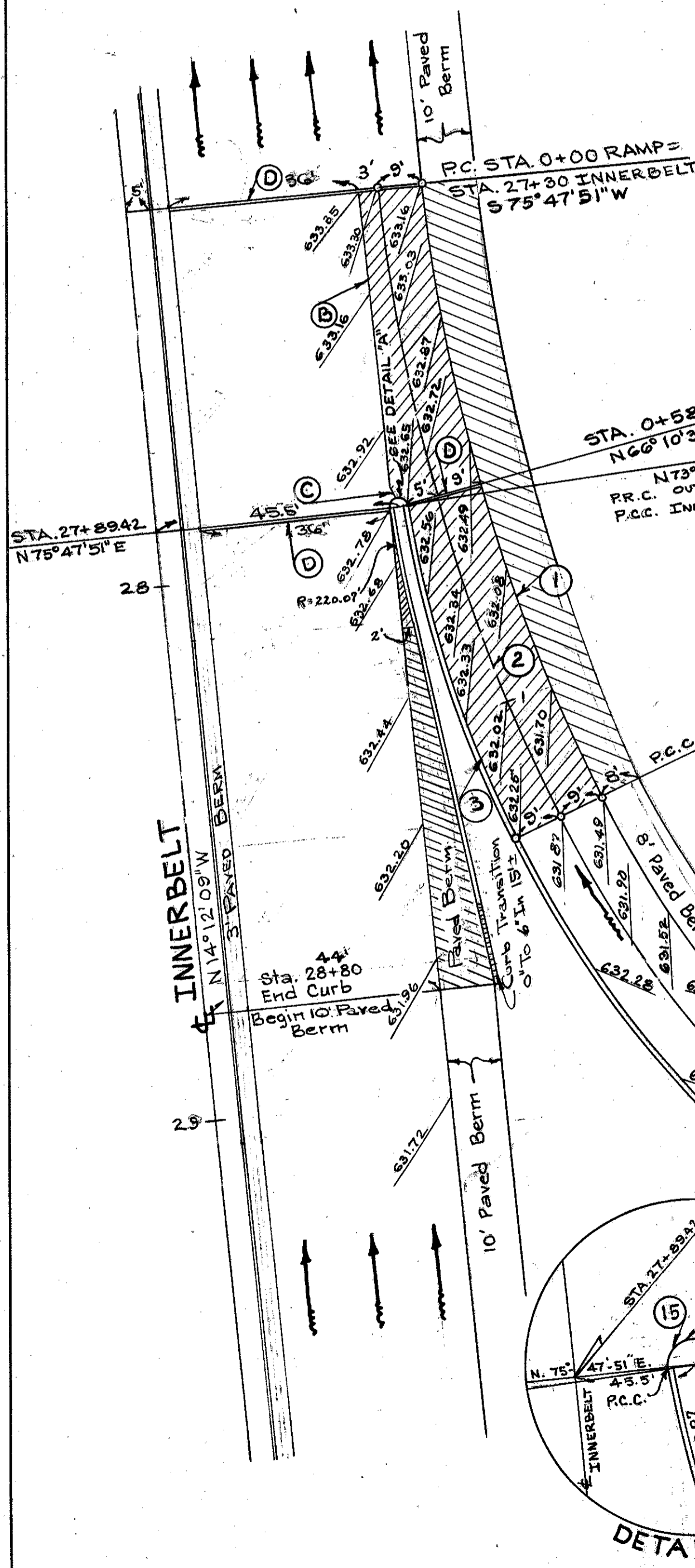
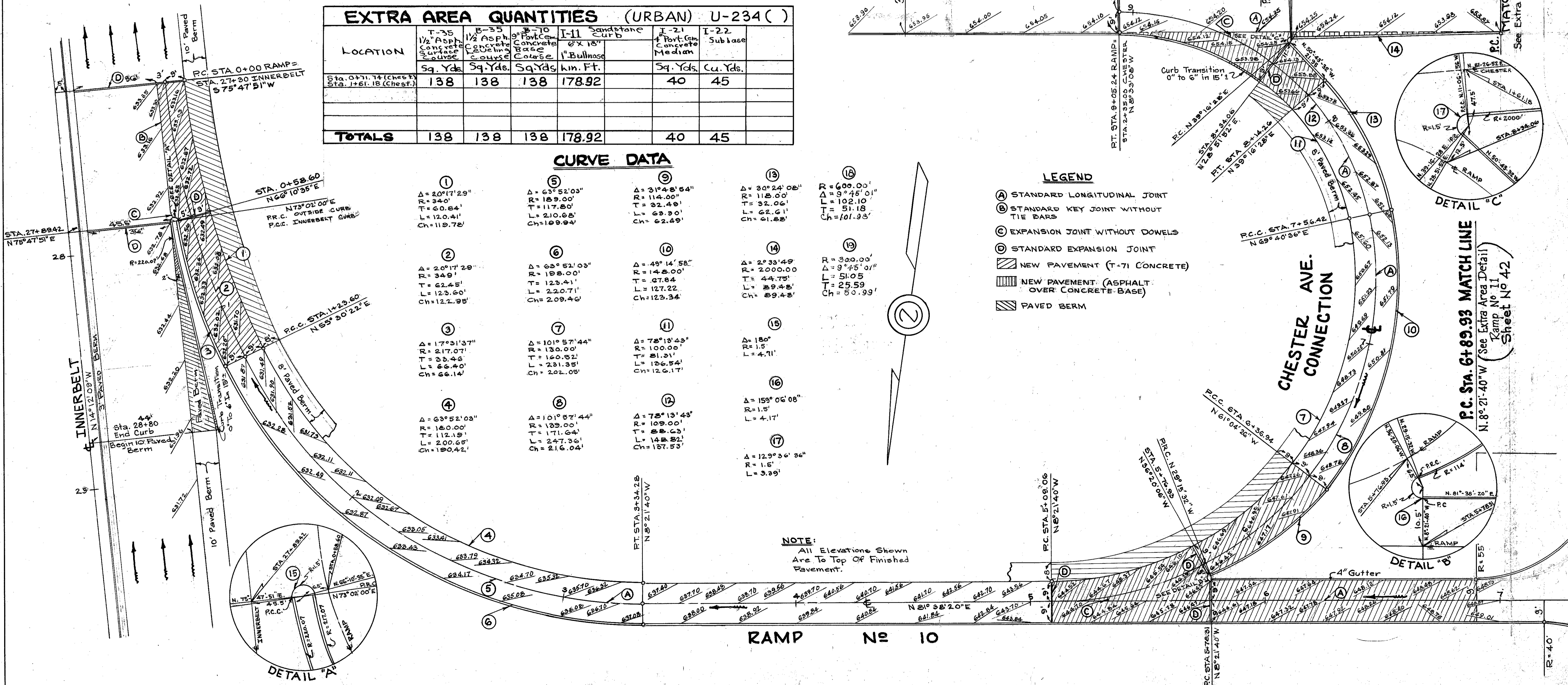
LOCATION	EXTRA AREA QUANTITIES (URBAN) U-234 ( )					
	T-35 1 1/2" Asp. Conc. Surface Course	B-35 1 1/2" Asp. Conc. Lev. Course	B-70 9" Portl. Conc. Base Course	I-11 Sandstone Curb 6"x18" 3" Bullnose	I-21 4" Portl. Conc. Median	I-22 Subbase
	Sq. Yds.	Sq. Yds.	Sq. Yds.	Lin. Ft.	Sq. Yds.	Cu. Yds.
Sta. 0+71.74 (Chester)	138	138	138	178.92	40	45
Sta. 1+61.18 (Chester)						
<b>TOTALS</b>	<b>138</b>	<b>138</b>	<b>138</b>	<b>178.92</b>	<b>40</b>	<b>45</b>

### CURVE DATA

① Δ = 20°17'29" R = 340' T = 60.64' L = 120.41' Ch = 119.78'	⑤ Δ = 63°52'03" R = 189.00' T = 117.80' L = 210.68' Ch = 189.94'	⑨ Δ = 31°48'54" R = 114.00' T = 32.49' L = 63.90' Ch = 62.49'	⑬ Δ = 30°24'08" R = 118.00' T = 32.49' L = 62.61' Ch = 61.88'
② Δ = 20°17'29" R = 349' T = 62.45' L = 123.60' Ch = 122.98'	⑥ Δ = 63°52'03" R = 198.00' T = 123.41' L = 220.71' Ch = 209.46'	⑩ Δ = 49°14'58" R = 148.00' T = 67.84' L = 127.22' Ch = 123.34'	⑭ Δ = 2°33'49" R = 2000.00' T = 44.75' L = 39.48' Ch = 89.48'
③ Δ = 17°31'37" R = 217.07' T = 38.46' L = 66.40' Ch = 66.14'	⑦ Δ = 101°57'44" R = 130.00' T = 81.31' L = 231.35' Ch = 202.05'	⑪ Δ = 78°18'43" R = 100.00' T = 81.31' L = 126.54' Ch = 126.17'	⑰ Δ = 15°06'08" R = 1.5' L = 4.17'
④ Δ = 63°52'03" R = 180.00' T = 112.19' L = 200.65' Ch = 190.42'	⑧ Δ = 101°57'44" R = 125.00' T = 171.64' L = 247.36' Ch = 216.04'	⑫ Δ = 78°18'43" R = 109.00' T = 88.63' L = 148.82' Ch = 137.53'	⑱ Δ = 129°36'36" R = 1.5' L = 3.39'

### LEGEND

- (A) STANDARD LONGITUDINAL JOINT
- (B) STANDARD KEY JOINT WITHOUT TIE BARS
- (C) EXPANSION JOINT WITHOUT DOWELS
- (D) STANDARD EXPANSION JOINT
- NEW PAVEMENT (T-71 CONCRETE)
- NEW PAVEMENT (ASPHALT OVER CONCRETE-BASE)
- PAVED BERM



NOTE:  
All Elevations Shown  
Are To Top Of Finished  
Pavement.

## RAMP NO 10

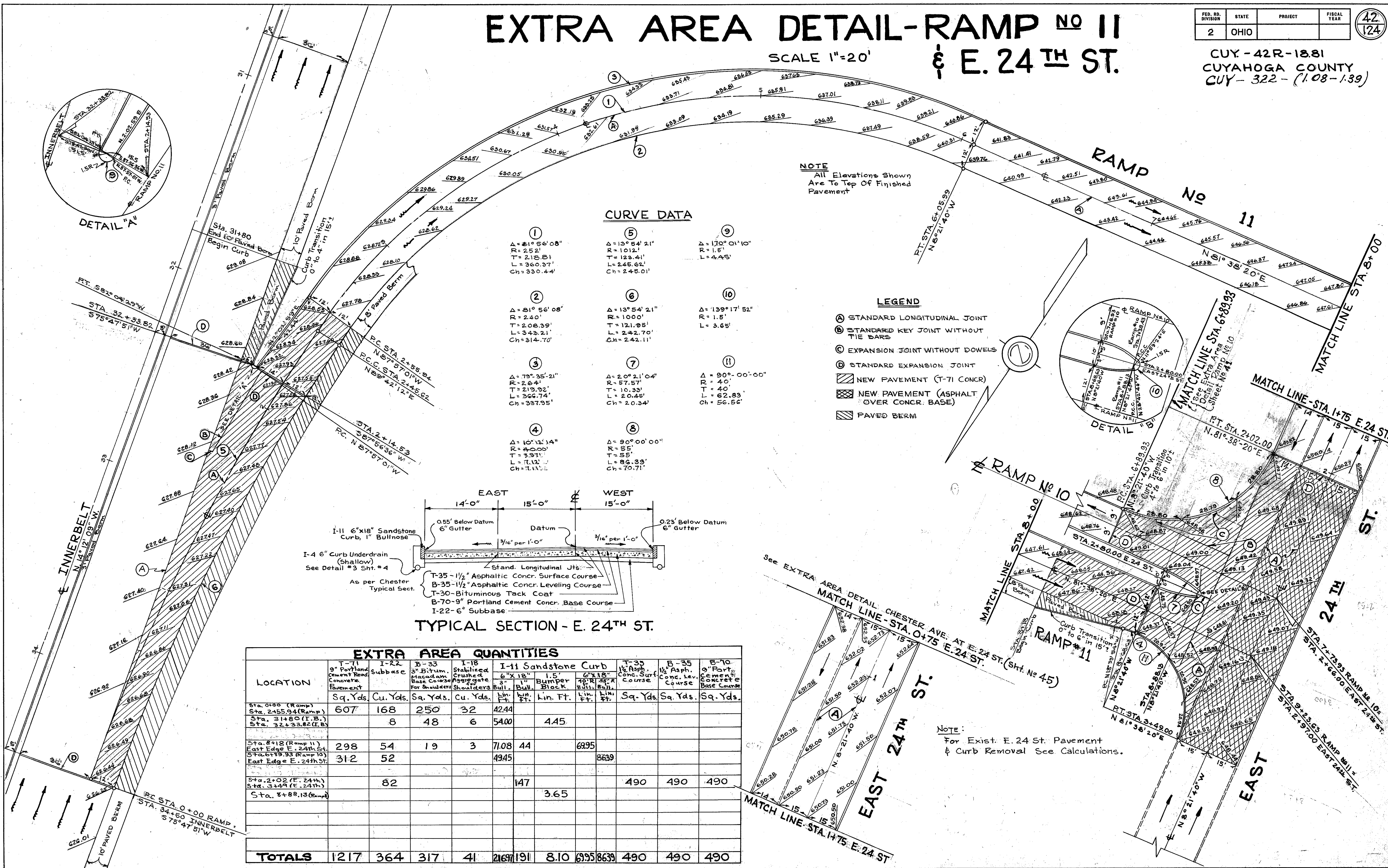
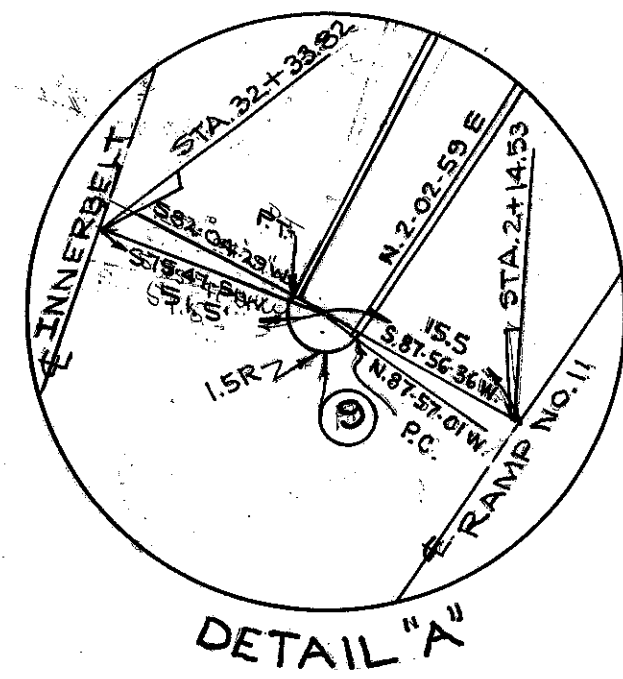
# EXTRA AREA DETAIL-RAMP NO 11 & E. 24<sup>TH</sup> ST.

SCALE 1"=20'

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

42  
124

CUY-42R-1881  
CUYAHOGA COUNTY  
CUY-322-(1.08-1.39)



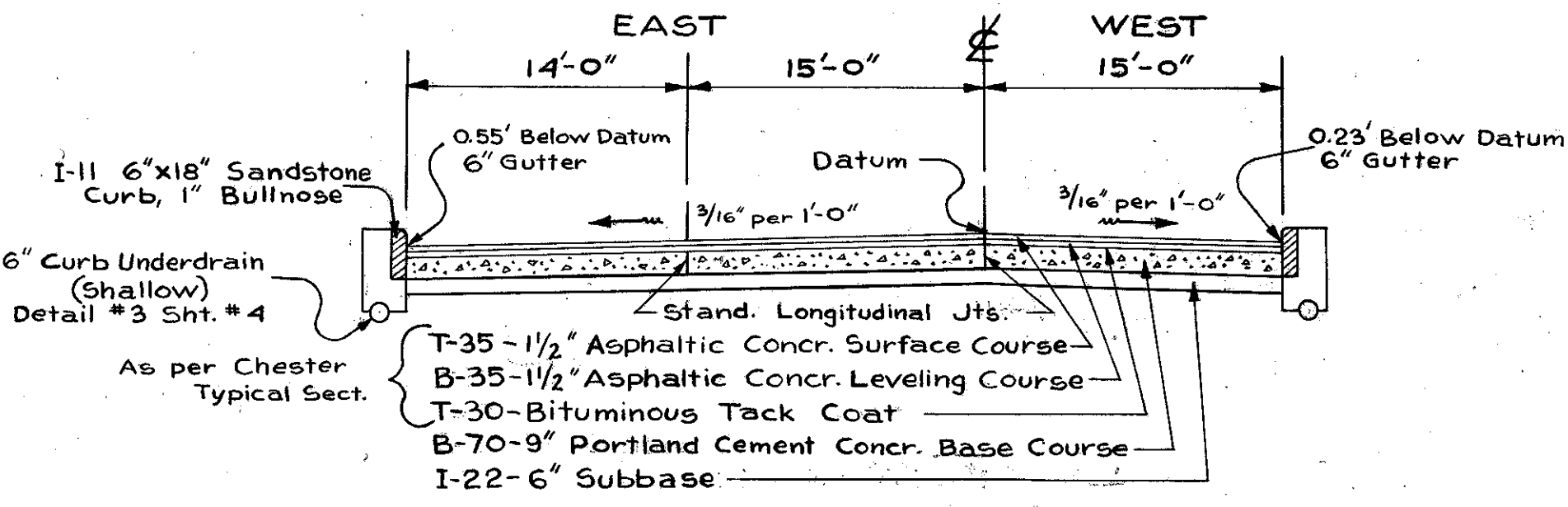
**NOTE**  
All Elevations Shown  
Are To Top Of Finished  
Pavement

### CURVE DATA

① Δ = 81° 56' 08" R = 252' T = 218.81' L = 360.37' Ch = 330.44'	⑤ Δ = 13° 54' 21" R = 1012' T = 123.41' L = 246.62' Ch = 245.01'	⑨ Δ = 17° 01' 10" R = 1.5' L = 4.45'
② Δ = 81° 56' 08" R = 240' T = 208.39' L = 343.21' Ch = 314.70'	⑥ Δ = 13° 54' 21" R = 1000' T = 121.95' L = 242.70' Ch = 242.11'	⑩ Δ = 139° 17' 52" R = 1.5' L = 3.65'
③ Δ = 79° 35' 21" R = 264' T = 219.92' L = 366.74' Ch = 337.95'	⑦ Δ = 2° 21' 04" R = 57.57' T = 10.33' L = 20.45' Ch = 20.34'	⑪ Δ = 90° 00' 00" R = 40' T = 40' L = 62.83' Ch = 56.56'
④ Δ = 10° 12' 14" R = 4000' T = 391' L = 71.12' Ch = 7.112'	⑧ Δ = 90° 00' 00" R = 55' T = 55' L = 86.39' Ch = 70.71'	

### LEGEND

- Ⓐ STANDARD LONGITUDINAL JOINT
- Ⓑ STANDARD KEY JOINT WITHOUT TIE BARS
- Ⓒ EXPANSION JOINT WITHOUT DOWELS
- Ⓓ STANDARD EXPANSION JOINT
- ▨ NEW PAVEMENT (T-71 CONCR)
- ▩ NEW PAVEMENT (ASPHALT OVER CONCR. BASE)
- ▭ PAVED BERM



### EXTRA AREA QUANTITIES

LOCATION	T-71	I-22	B-33	I-18	I-11 Sandstone Curb			T-35	B-35	B-70
	9" Portl. Cement Concrete Pavement	Subbase	3" Bitum. Macadam Base Course For Shoulders	Stabilized Crushed Aggregate	6" x 18" Bull.	1.5" Bumper Block	40" x 28" Bull.	1 1/2" Asph. Conc. Surf. Course	1 1/2" Asph. Conc. Lev. Course	9" Portl. Cement Concrete Base Course
	Sq. Yds.	Cu. Yds.	Sq. Yds.	Cu. Yds.	Sq. Ft.	Lin. Ft.	Sq. Ft.	Sq. Yds.	Sq. Yds.	Sq. Yds.
Sta. 0+00 (Ramp)	607	168	250	32	42.44					
Sta. 2+55.94 (Ramp)										
Sta. 31+80 (I.B.)		8	48	6	5400	4.45				
Sta. 32+33.82 (I.B.)										
Sta. 2+18 (Ramp 11)	298	54	19	3	71.08	44	69.95			
East Edge E. 24th St.										
Sta. 2+19.93 (Ramp 10)	312	52			49.45		86.39			
East Edge E. 24th St.										
Sta. 2+02 (E. 24th)		82			1.47			490	490	490
Sta. 3+49 (E. 24th)										
Sta. 3+88.13 (Ramp)						3.65				
<b>TOTALS</b>	<b>1217</b>	<b>364</b>	<b>317</b>	<b>41</b>	<b>2167</b>	<b>191</b>	<b>8.10</b>	<b>69.95</b>	<b>86.39</b>	<b>490</b>

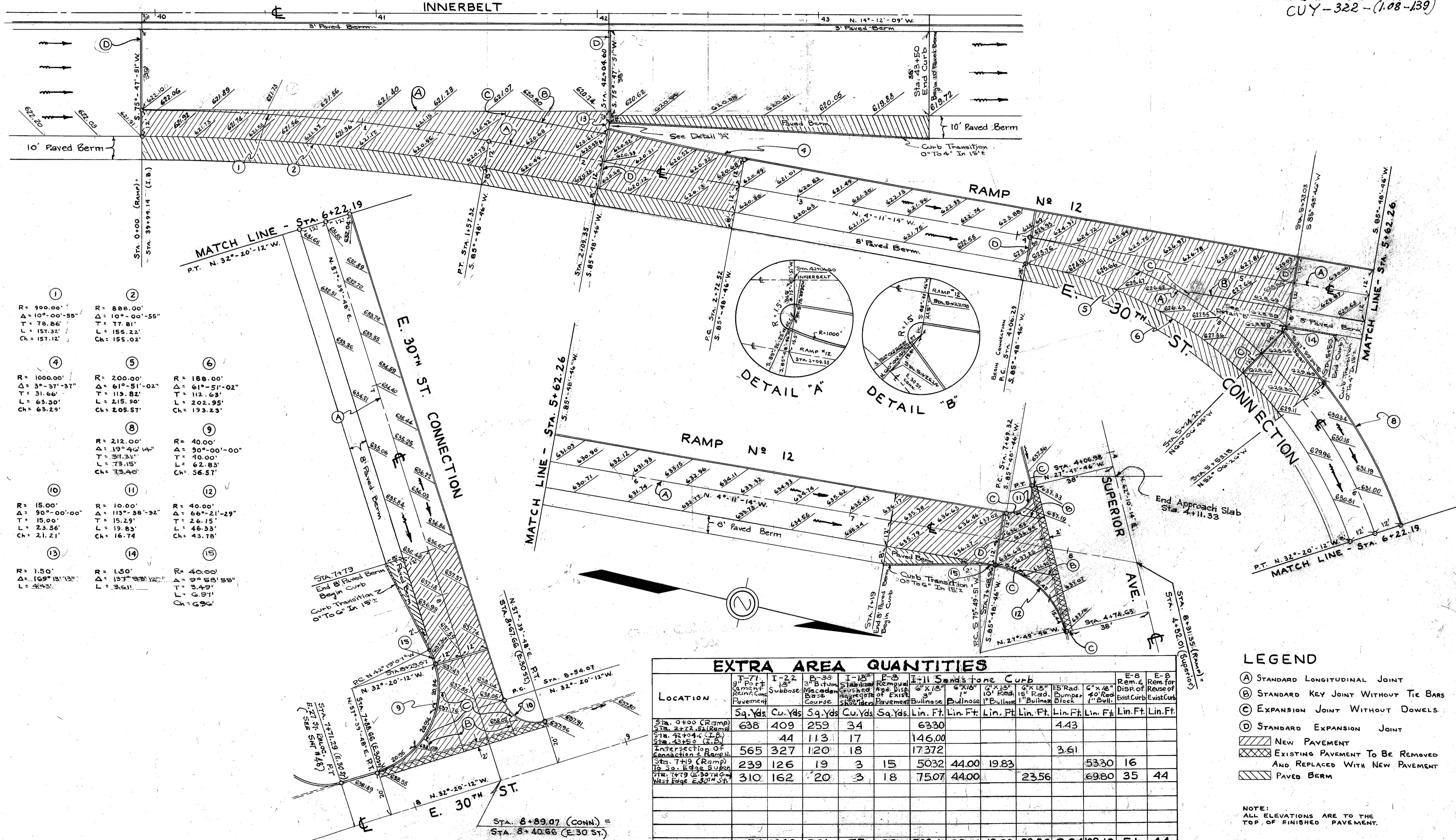
**NOTE:**  
For Exist. E. 24 St. Pavement  
& Curb Removal See Calculations.

# EXTRA AREA DETAIL - RAMP No 12

SCALE: 1" = 20'

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		43 124

CUYAHOGA COUNTY  
 CUY-42R-18.81  
 CUY-322-(1.08-139)



① R = 900.00' Δ = 10°-00'-55" T = 78.86' L = 157.32' Ch = 157.12'	② R = 888.00' Δ = 10°-00'-55" T = 77.81' L = 155.22' Ch = 155.02'	③ R = 1000.00' Δ = 3°-37'-37" T = 31.66' L = 63.30' Ch = 63.29'	④ R = 200.00' Δ = 61°-51'-02" T = 112.63' L = 202.95' Ch = 193.23'	⑤ R = 188.00' Δ = 61°-51'-02" T = 112.63' L = 202.95' Ch = 193.23'	⑥ R = 212.00' Δ = 19°-46'-14" T = 37.31' L = 73.15' Ch = 73.40'	⑦ R = 40.00' Δ = 90°-00'-00" T = 40.00' L = 62.83' Ch = 56.57'	⑧ R = 40.00' Δ = 66°-21'-29" T = 26.15' L = 46.53' Ch = 43.78'	⑨ R = 15.00' Δ = 90°-00'-00" T = 15.00' L = 23.56' Ch = 21.21'	⑩ R = 10.00' Δ = 113°-38'-32" T = 15.29' L = 19.83' Ch = 16.74'	⑪ R = 40.00' Δ = 66°-21'-29" T = 26.15' L = 46.53' Ch = 43.78'	⑫ R = 40.00' Δ = 90°-00'-00" T = 40.00' L = 62.83' Ch = 56.57'	⑬ R = 1.50' Δ = 169°-13'-12" L = 4.43'	⑭ R = 1.50' Δ = 137°-59'-12" L = 3.61'	⑮ R = 40.00' Δ = 90°-58'-55" T = 3.49' L = 6.97' Ch = 6.96'
--	--	--	---	---	--	---	---	---	--	---	---	---	---	--

### EXTRA AREA QUANTITIES

LOCATION	I-71		I-22		B-33		I-18		E-8		I-11 Sandstone Curb		E-8		E-8	
	Sq. Yds	Cu. Yds	Sq. Yds	Cu. Yds	Sq. Yds	Cu. Yds	Sq. Yds	Cu. Yds	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.
Sta. 0+00 (Ramp)	638	409	259	34			6330				4.43					
Sta. 2+72 (Ramp)					44	113	17	146.00								
Sta. 4+04 (Curb)																
Intersection of Connection & Ramp	565	327	120	18			17372				3.61					
Sta. 7+19 (Ramp)	239	126	19	3	15		5032	44.00	19.83			5330	16			
Sta. 7+19 (Stationing West Edge E. 30th St)	310	162	20	3	18		7507	44.00		23.56		6980	35	44		
<b>TOTALS</b>	<b>1752</b>	<b>1068</b>	<b>531</b>	<b>75</b>	<b>33</b>		<b>50841</b>	<b>88.00</b>	<b>19.83</b>	<b>23.56</b>	<b>8.04</b>	<b>123.10</b>	<b>51</b>	<b>44</b>		

- ### LEGEND
- (A) STANDARD LONGITUDINAL JOINT
  - (B) STANDARD KEY JOINT WITHOUT TIE BARS
  - (C) EXPANSION JOINT WITHOUT DOWELS
  - (D) STANDARD EXPANSION JOINT
  - [Hatched Box] NEW PAVEMENT
  - [Cross-hatched Box] EXISTING PAVEMENT TO BE REMOVED AND REPLACED WITH NEW PAVEMENT
  - [Solid Box] PAVED BERM

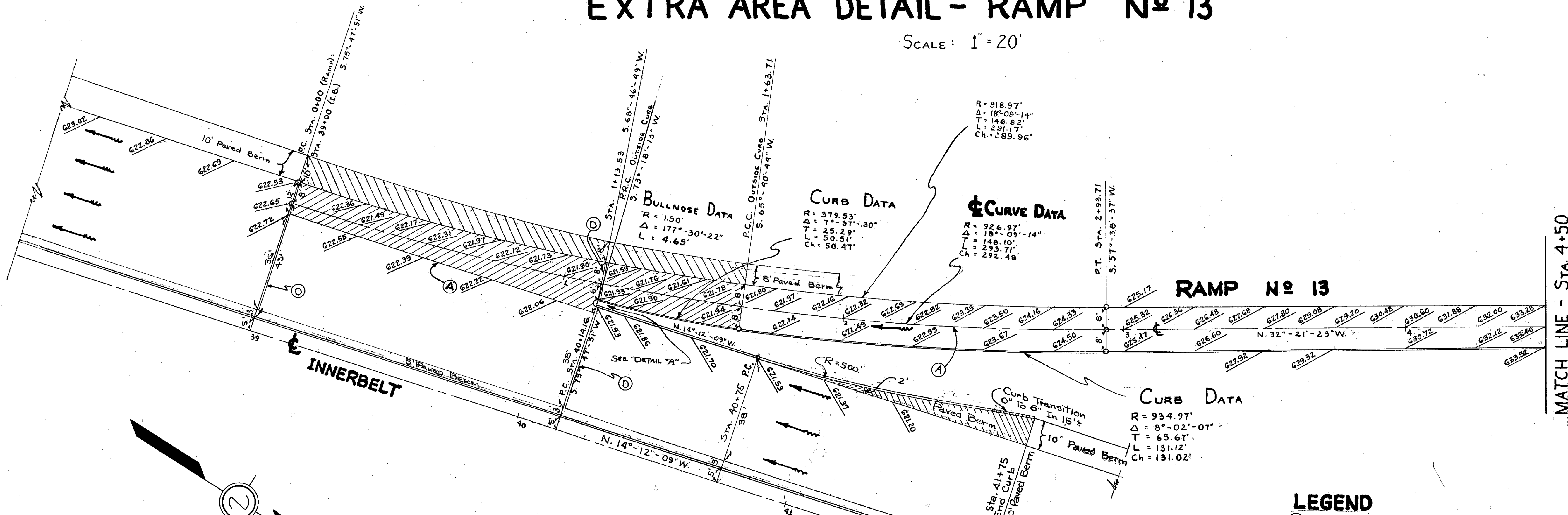
NOTE:  
 ALL ELEVATIONS ARE TO THE TOP OF FINISHED PAVEMENT.

# EXTRA AREA DETAIL - RAMP No 13

SCALE: 1" = 20'

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		44 124

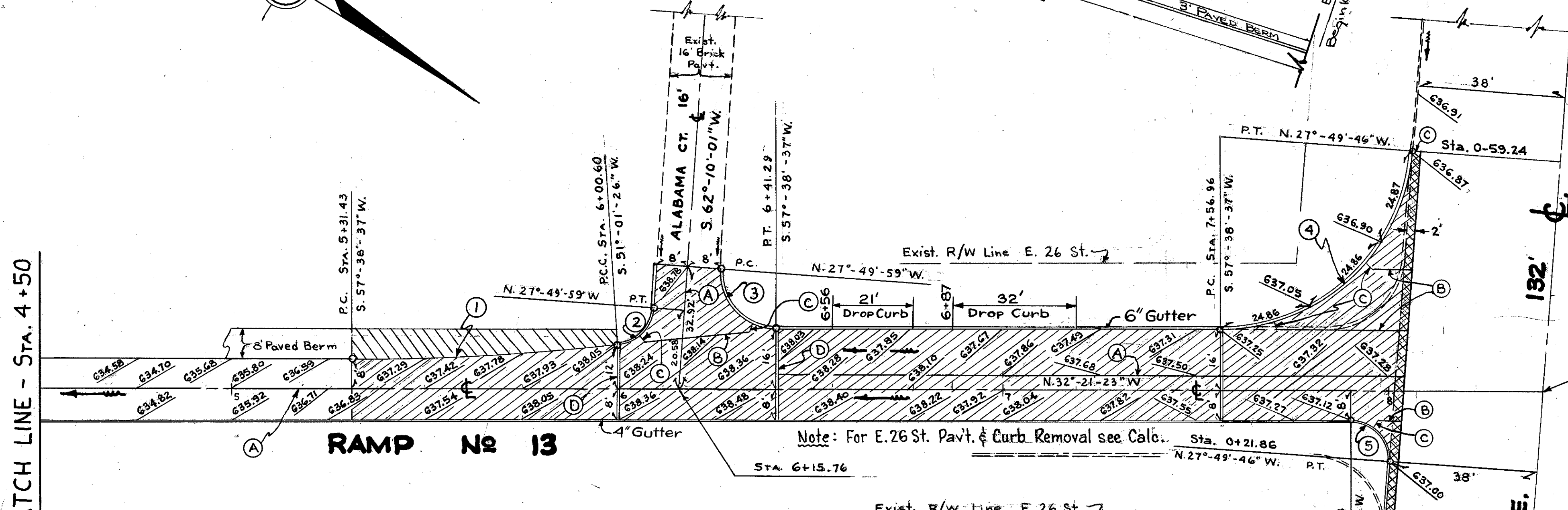
CUYAHOGA COUNTY  
 CUY-42R-18.81  
 CUY-322-(1.08-1.39)



MATCH LINE - STA. 4+50

### LEGEND

- (A) STANDARD LONGITUDINAL JOINT
- (B) STANDARD KEY JOINT WITHOUT TIE BARS
- (C) EXPANSION JOINT WITHOUT DOWELS
- (D) STANDARD EXPANSION JOINT
- [Hatched Box] NEW PAVEMENT
- [Cross-hatched Box] EXISTING PAVEMENT TO BE REMOVED AND REPLACED WITH NEW PAVEMENT
- [Diagonal Hatched Box] PAVED BERM



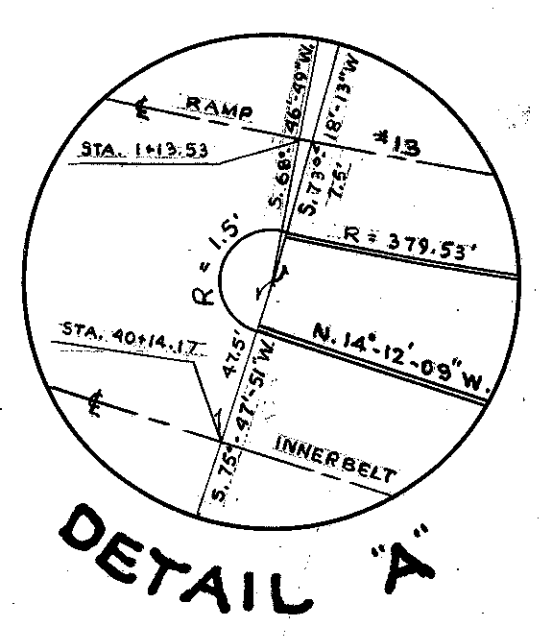
1	2	3	4
R = 600.00' Δ = 6°-37'-11" T = 34.70' L = 69.32' Ch = 69.28'	R = 10.00' Δ = 78°-51'-25" T = 8.22' L = 13.76' Ch = 12.70'	R = 15.00' Δ = 94°-31'-25" T = 16.23' L = 2.475' Ch = 22.03'	R = 50.00' Δ = 85°-28'-22" T = 46.20' L = 74.59' Ch = 67.86'

5
R = 10.00' Δ = 94°-31'-38" T = 10.82' L = 16.30' Ch = 14.69'

NOTE:  
 ALL ELEVATIONS ARE TO THE TOP OF FINISHED PAVEMENT.

LOCATION	EXTRA AREA QUANTITIES					I-11 Sandstone Curb				
	Sq. Yds.	Cu. Yds.	Sq. Yds.	Sq. Yds.	Cu. Yds.	6" x 18" Bullnose	15" Radius Bumper Block	10" Radius Bullnose	6" x 18" Bullnose	6" x 18" Bullnose
Sta. 0+00 (Ramp)	258	190	157		20					
Sta. 1+63.71 (Ramp)										
Sta. 4+14.16 (I.B.)	4	10	41		5		4.65			161.00
Sta. 4+175.0 (I.B.)										
So. Turnout Alabama Ct.								13.76		11.00
No. Turnout Alabama Ct.									2475	
Sta. 5+31.43 (Right)										
Sta. 6+41.29 (Left)										
Sta. 0+59.24 (Superior)										
Sta. 8+40.00 (Ramp)	790	*141	46		6					74.59
Sta. 0+59.24 (Superior)										
Sta. 0+40 (Superior)							50.51			
Sta. 1+13.53 (Ramp)										
Sta. 1+63.71 (Ramp)										
<b>TOTALS</b>	<b>1052</b>	<b>341</b>	<b>244</b>	<b>22.00</b>	<b>31</b>	<b>309.51</b>	<b>4.65</b>	<b>30.26</b>	<b>2475</b>	<b>7459</b>

\* 6" Subbase



MATCH LINE - Sta. 4+50

CUY - 322-(1.08-1.39)  
 CUYAHOGA COUNTY  
 CUY - 12 - 1928

# EXTRA AREA DETAIL

## CHESTER AVE AT E.24<sup>TH</sup> ST.

SCALE: 1"=20'

① Δ - 07°51'07"  
 R - 715.14  
 L - 98.00  
 T - 49.08  
 CH - 97.92

② Δ - 06°06'46"  
 R - 1000.00  
 L - 106.69  
 T - 53.39  
 CH - 106.64

③ Δ - 07°51'07"  
 R - 749.81  
 L - 102.75  
 T - 51.46  
 CH - 102.67

④ Δ - 09°45'01"  
 R - 600.00  
 L - 102.10  
 T - 51.18  
 CH - 101.98

⑤ Δ - 09°45'01"  
 R - 300.00  
 L - 51.05  
 T - 25.59  
 CH - 50.99

⑥ Δ - 88°47'25"  
 R - 25  
 L - 39.22

⑦ Δ - 90°12'35"  
 R - 25  
 L - 39.36

⑧ Δ - 89°47'25"  
 R - 13  
 L - 20.40

⑨ Δ - 90°12'35"  
 R - 13  
 L - 20.47

⑩ Δ - 89°48'32"  
 R - 35  
 L - 54.86

⑪ Δ - 90°11'28"  
 R - 40  
 L - 62.84

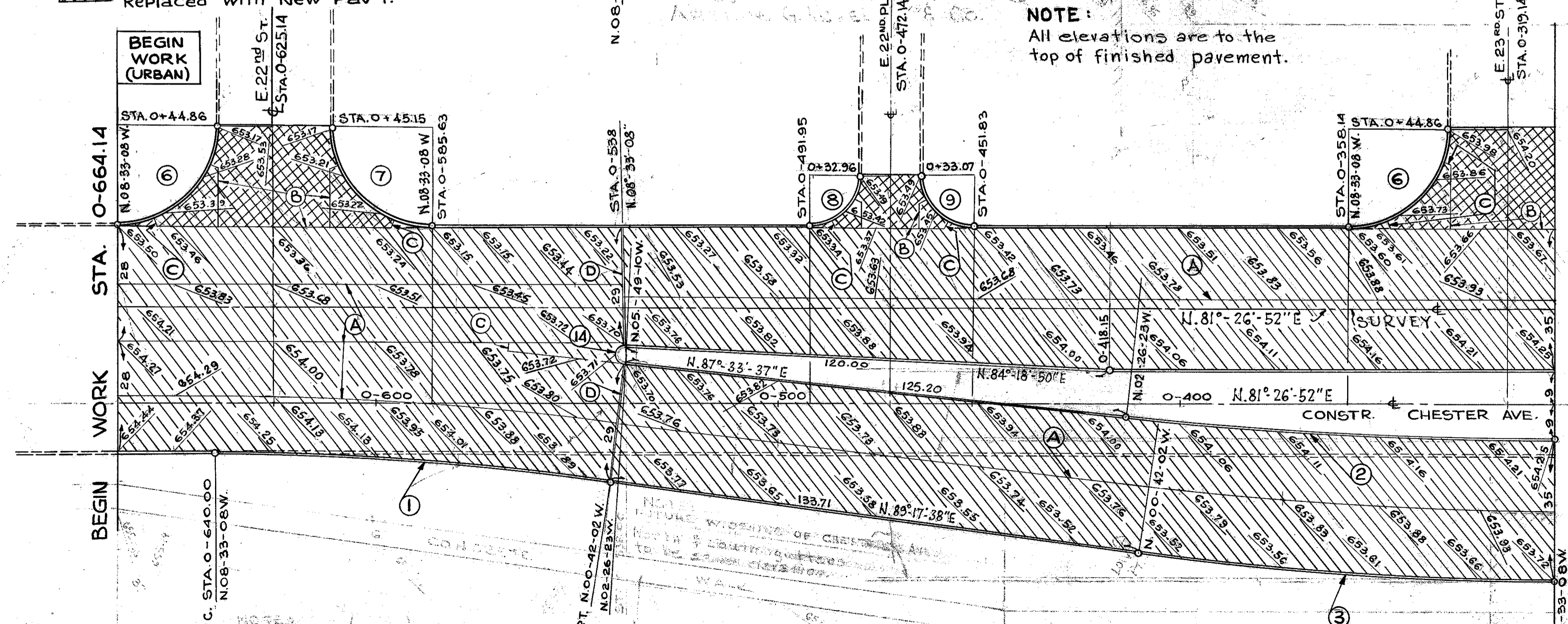
⑫ Δ - 89°48'32"  
 R - 40  
 L - 62.70

⑬ Δ - 180°00'  
 R - 2.5  
 L - 7.85

⑭ Δ - 176°34'12"  
 R - 2.5  
 L - 7.68

### LEGEND

- Ⓐ Standard Longitudinal Joint
- Ⓑ Standard Key Joint without Tie Bars
- Ⓒ Expansion Joint without Dowels
- Ⓓ Standard Expansion Joint
- ▨ New Pavement (Asphalt over Concr. Base)
- ▩ Exist Pav't. to be Removed & Replaced with New Pav't.



See EXTRA AREA DETAIL RAMP N<sup>o</sup> 11 (Sheet N<sup>o</sup> 42)  
 MATCH LINE STA. O+75 E. 24 ST.

MATCH LINE STA. O+71.74  
 See EXTRA AREA DETAIL RAMP N<sup>o</sup> 10 (Sheet N<sup>o</sup> 41)

NOTE:  
 For Chester Ave. & E. 24 St. Pavement  
 & Curb Removal See Calculations

LOCATION	URBAN EXTRA AREA QUANTITIES U-234(C)											
	B-70		T-35		B-35		I-22		I-21			
	Sq. Yd.	Cu. Yd.	Sq. Yd.	Cu. Yd.	Sq. Yd.	Cu. Yd.	Sq. Yd.	Cu. Yd.	Sq. Yd.	Cu. Yd.		
STA. O-664.14 TO STA. O-307.42	489	489	2491	2491	415	62	1008.59	7.68	15.70			
E. 22 <sup>ND</sup> ST.	113	113	32	32	5	40.87	78.58	23	113	55		
E. 23 <sup>RD</sup> ST.	111	111	32	32	5	40.87	78.58	12	32	29		
E. 24 <sup>TH</sup> ST. (No. E. 24 <sup>TH</sup> ST. (So.))	272	272	272	272	45	5.40	62.84	12	32	29		
	540	540	540	540	90	133.54	125.54					
<b>TOTALS</b>	<b>4080</b>	<b>4080</b>	<b>4080</b>	<b>4080</b>	<b>717</b>	<b>62</b>	<b>1439.42</b>	<b>81.74</b>	<b>157.16</b>	<b>5486</b>	<b>23.38</b>	<b>70</b>
												<b>288</b>
												<b>168</b>

# EXTRA AREA DETAIL

## CHESTER AVE. AT E. 30<sup>TH</sup> ST.

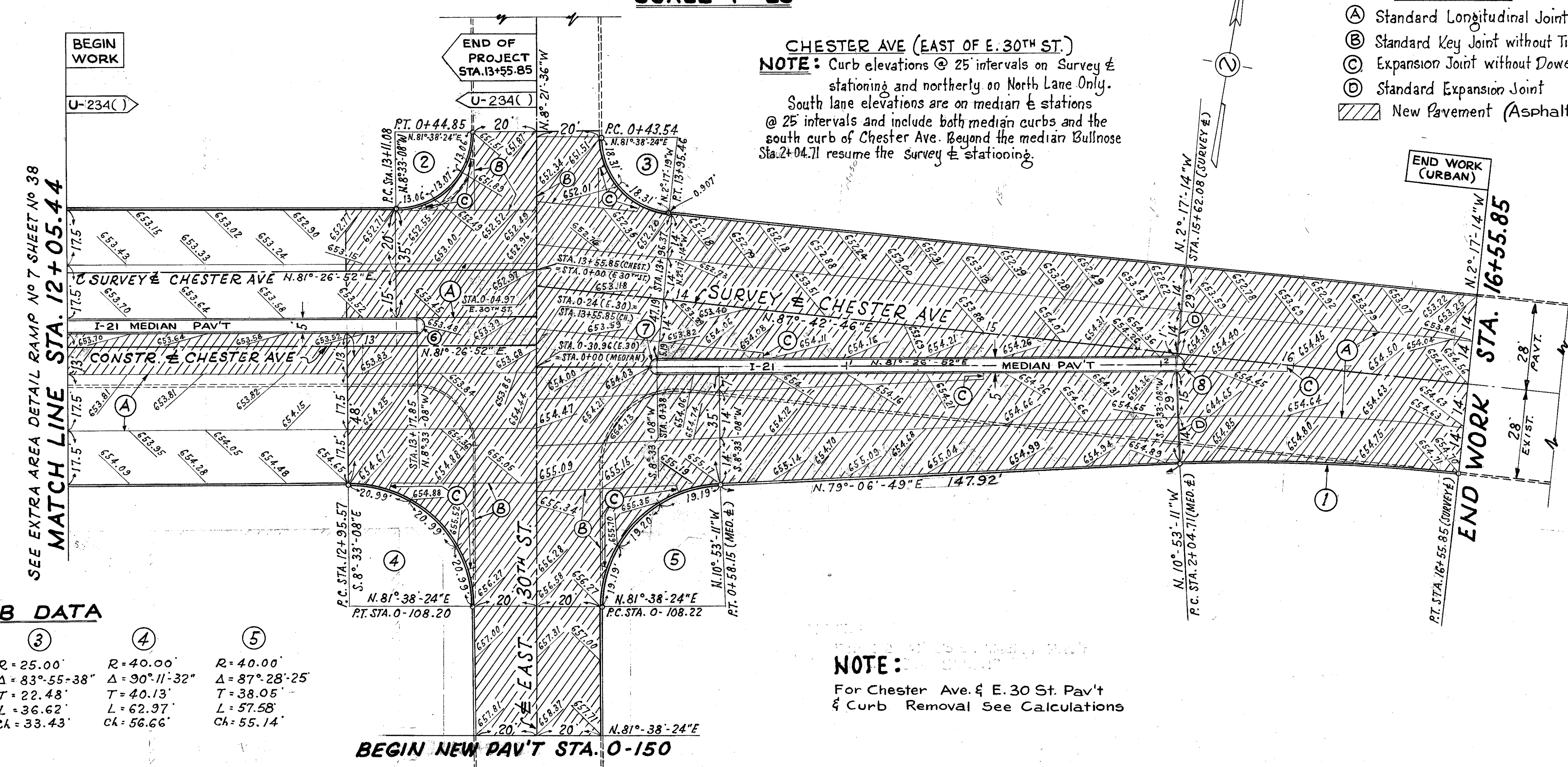
SCALE: 1"=20'

FED. RD. DIVISION	STATE	PROJECT	46 124
2	OHIO		

CUY - 322-(1.08-1.39)  
CUYAHOGA COUNTY  
CUY-421-19.28

### LEGEND

- (A) Standard Longitudinal Joint
- (B) Standard Key Joint without Tie Bars
- (C) Expansion Joint without Dowels
- (D) Standard Expansion Joint
- ▨ New Pavement (Asphalt over Concr. Base)



CHESTER AVE (EAST OF E. 30<sup>TH</sup> ST.)  
**NOTE:** Curb elevations @ 25' intervals on Survey & stationing and northerly on North Lane Only. South lane elevations are on median & stations @ 25' intervals and include both median curbs and the south curb of Chester Ave. Beyond the median Bullnose Sta. 2+04.71 resume the Survey & stationing.

**NOTE:** All Elevations are to the top of finished pavement.

### CURB DATA

①	②	③	④	⑤
R=597.395'	R=25.00'	R=25.00'	R=40.00'	R=40.00'
Δ=8°35'57"	Δ=89°48'28"	Δ=83°55'38"	Δ=90°11'32"	Δ=87°28'25"
Dc=9°32'57"	T=24.92'	T=22.48'	T=40.13'	T=38.05'
L=44.89'	L=39.19'	L=36.62'	L=62.97'	L=57.58'
L=89.66'	Ch=35.296'	Ch=33.43'	Ch=56.66'	Ch=55.14'
Ext.=1.63'				

### MEDIAN CURB DATA

⑥	⑦	⑧
R=2.5'		
Δ=180°00'00"		
L=7.86'		

**NOTE:** For Chester Ave. & E. 30 St. Pav't & Curb Removal See Calculations

### URBAN EXTRA AREA QUANTITIES U-234 ( )

LOCATION	B-70 9" PORTLAND CEMENT CONCRETE BASE COURSE	T-35 1 1/2" ASPH. CONCRETE SURFACE COURSE	B-35 1 1/2" ASPH. CONCRETE LEVELING COURSE	I-22 6" SUBBASE	I-21 4" CONCRETE MEDIAN PAVEMENT TYPE 1	I-11 6"x18" SANDSTONE CURB BULLNOSE			
						STRAIGHT	RADIUS		
							25' RADIUS BUMPER BLOCK	25'	40'
	SQ.YD.	SQ.YD.	SQ.YD.	CU.YD.	SQ.YD.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.
STA. 12+95.57 TO STA. 16+55.85	3316	3316	3316	553					
STA. 12+05.44 TO STA. 12+95.57	130	130	130	22					
STA. 0+108.22 (E. 30 ST.) TO STA. 0+150	186	186	186	31					
STA. 12+05.44 TO STA. 13+17.85				31	50	134.69	7.86		
STA. 0+38 (MEDIAN E) TO STA. 2+04.71				46	74	333.42	15.72		
STA. 12+95.57 (CHESTER) TO STA. 0+44.85 (E. 30)						15.51		39.19	
STA. 0+43.54 (E. 30) TO STA. 16+55.85 (CHESTER)						261.70		36.62	
STA. 12+95.57 (CHESTER) TO STA. 0+150 (E. 30)						41.80			57.58
STA. 0+150 (E. 30) TO STA. 16+55.85 (CHESTER)						279.36			61.10
<b>TOTALS</b>	<b>3632</b>	<b>3632</b>	<b>3632</b>	<b>683</b>	<b>124</b>	<b>1066.48</b>	<b>23.58</b>	<b>75.81</b>	<b>118.68</b>

# EXTRA AREA DETAIL EAST 25<sup>TH</sup> STREET CUL-DE-SAC

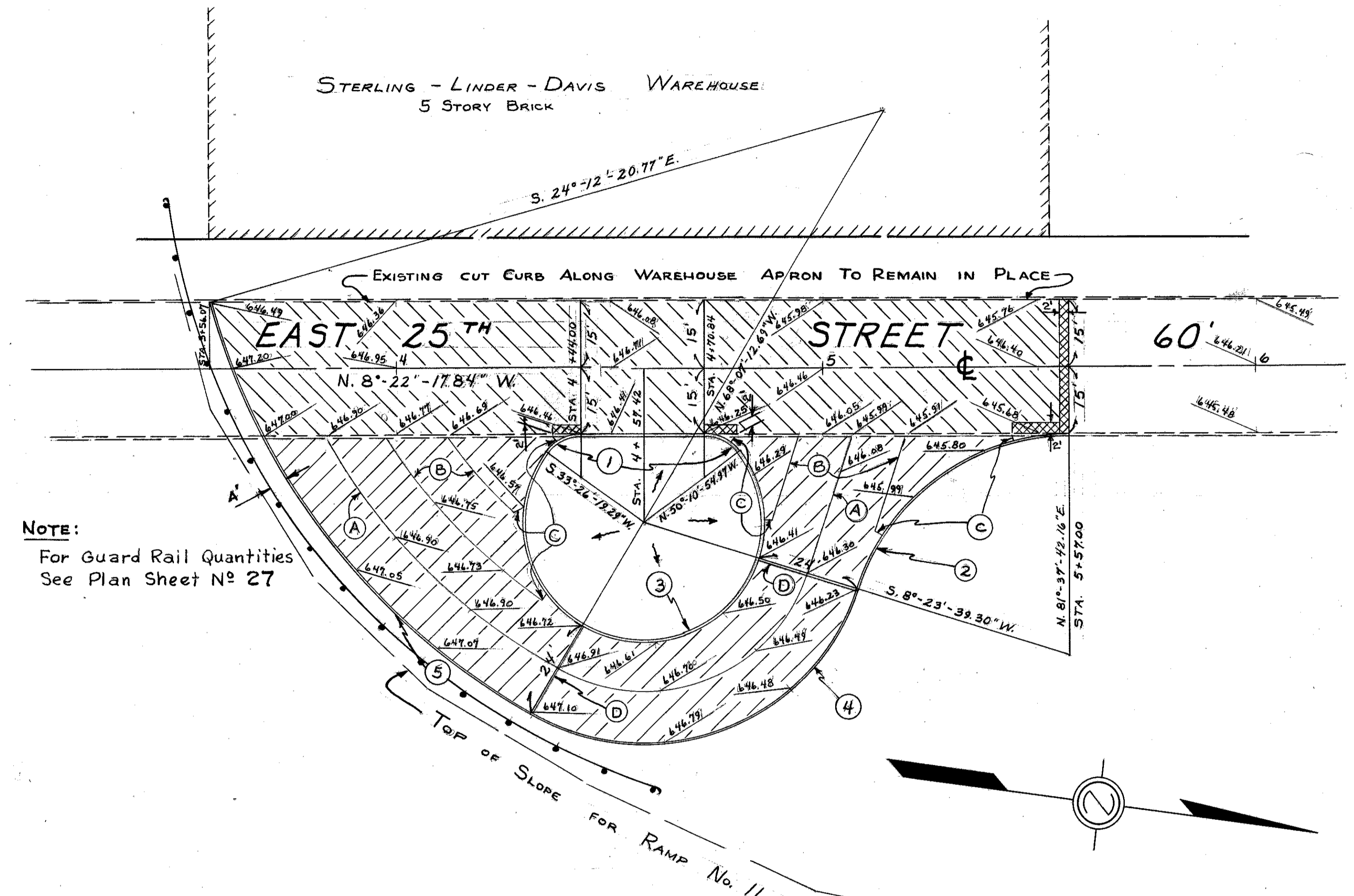
SCALE: 1" = 20'

FED. RD. DIVISION	STATE	PROJECT	47 124
2	OHIO		

CUYAHOGA COUNTY  
C.U.Y. - 42R - 18.81  
C.U.Y. - 322 - (7.08 - 1.39)

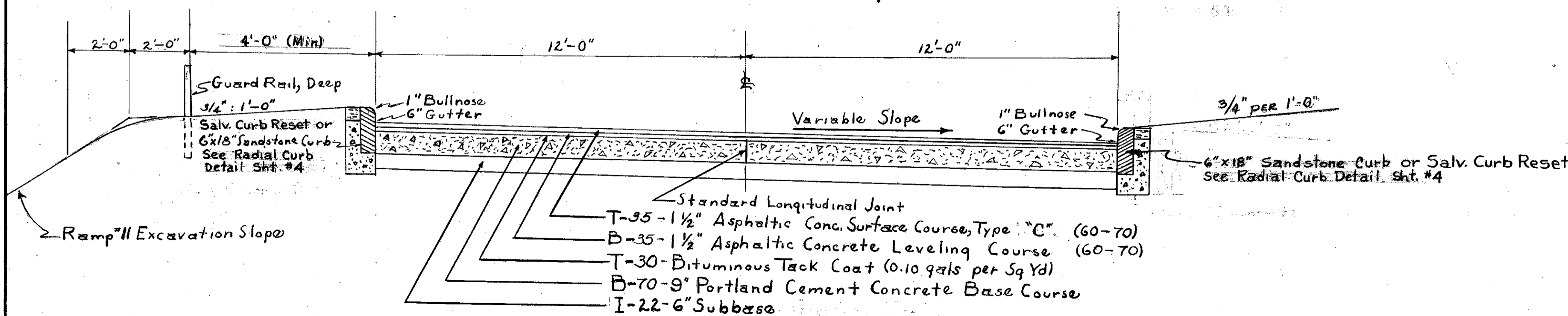
### LEGEND

- (A) STANDARD LONGITUDINAL JOINT
  - (B) STANDARD KEY JOINT WITHOUT TIE BARS
  - (C) EXPANSION JOINT WITHOUT DOWELS
  - (D) STANDARD EXPANSION JOINT
  - EXISTING PAVEMENT TO BE REMOVED AND REPLACED WITH NEW PAVEMENT
  - NEW PAVEMENT
  - PAVEMENT TO BE RESURFACED WITH T-35
- EAST HALF OF E. 25<sup>TH</sup> ST. PAV'T. TO BE BUILT UP WITH B-35
- NOTE:  
ALL ELEVATIONS ARE TO THE TOP OF FINISHED PAVEMENT



LOCATION	EXTRA AREA QUANTITIES												
	T-35 1 1/2" Asph. Conc. Surf. Course	B-35 1 1/2" Asph. Concrete Leveling Course	B-70 9" Portland Cement Concrete Base Course	I-22 Subbase	E-101 Excavatio	I-11 6" x 18" 1" Bullnose	Sandstone Curb*			E-8 Removal & Disposal of Existing Pavement	B-35 Sealing Vertical Face of Exist. Pave.	E-8 Removal & Disposal of Exist. Curb	E-8 Removal for Reuse of Exist. Curb
	Sq. Yds.	Sq. Yds.	Sq. Yds.	Cu. Yds.	Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.
E. 25 <sup>TH</sup> ST.	650	202	11	2		26.84				11	30	130	58
Cul-De-Sac	628	628	628	105	370	125.70	16.82	128.83	160.39				
<b>TOTALS</b>	<b>1278</b>	<b>830</b>	<b>639</b>	<b>107</b>	<b>370</b>	<b>152.54</b>	<b>16.82</b>	<b>128.83</b>	<b>160.39</b>	<b>11</b>	<b>30</b>	<b>130</b>	<b>58</b>

\* ALL CURB SET SHALL BE CONCRETE BACKED AS PER TYPICAL

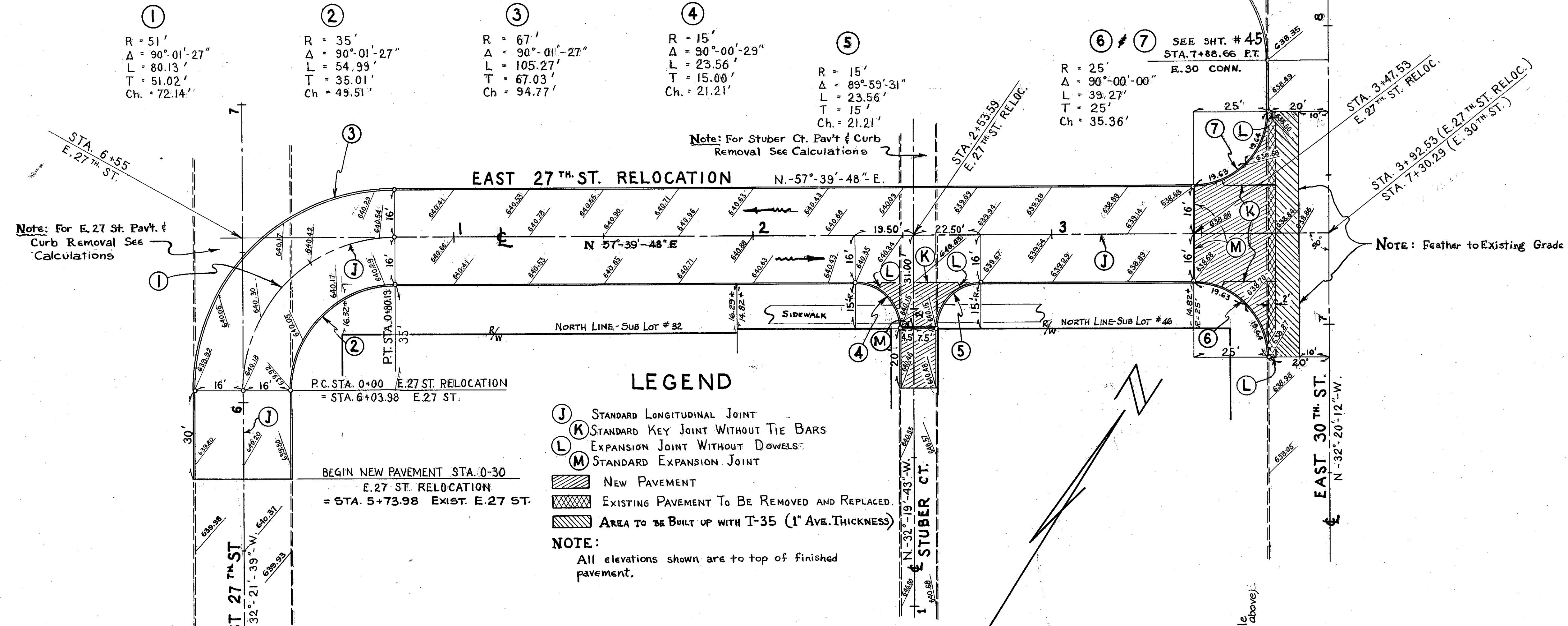


① R = 10.00' Δ = 48°-11'-22.87" T = 4.47' L = 8.41' Ch = 8.16'	② R = 52.00' Δ = 73°-14'-02.86" T = 38.64' L = 66.47' Ch = 62.03'	③ R = 28.00' Δ = 263°-31'-14.26" T = 31.30' L = 128.83' Ch = 41.74'	④ R = 52.00' Δ = 703°-29'-08.01" T = 65.94' L = 93.92' Ch = 81.66'	⑤ R = 164.00' Δ = 43°-54'-51.92" T = 66.12' L = 125.70' Ch = 122.64'
---	--	--	---	---

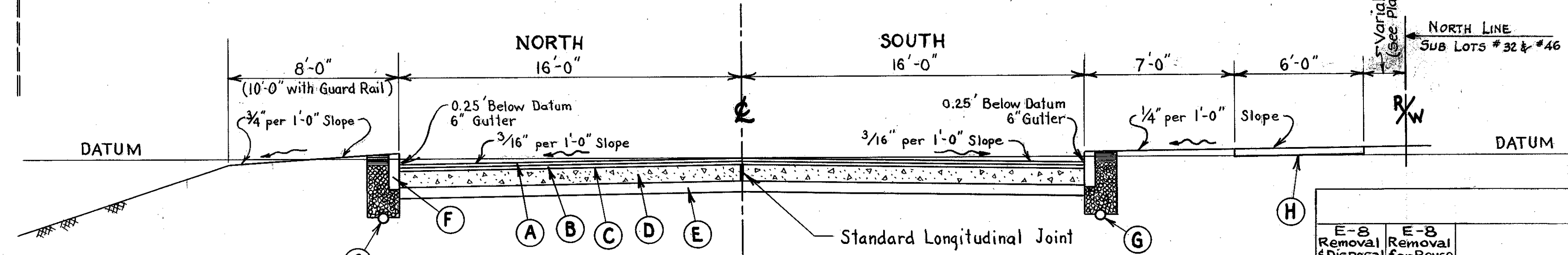


# EXTRA AREA DETAIL EAST 27<sup>TH</sup> ST. RELOCATION

SCALE 1" = 20 FT.



- ### LEGEND
- (J) STANDARD LONGITUDINAL JOINT
  - (K) STANDARD KEY JOINT WITHOUT TIE BARS
  - (L) EXPANSION JOINT WITHOUT DOWELS
  - (M) STANDARD EXPANSION JOINT
  - [Hatched Box] NEW PAVEMENT
  - [Cross-hatched Box] EXISTING PAVEMENT TO BE REMOVED AND REPLACED
  - [Diagonal-hatched Box] AREA TO BE BUILT UP WITH T-35 (1" AVE. THICKNESS)
- NOTE:**  
All elevations shown are to top of finished pavement.



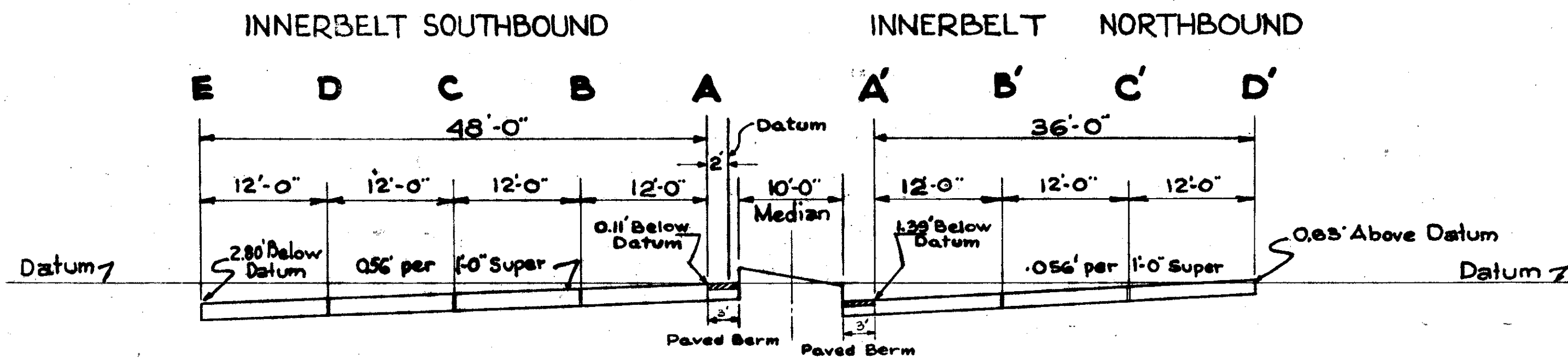
- (A) Item T-35 1/2" Asphaltic Concrete Surface Course, Type "C" (60-70)
- (B) Item B-35 1/2" Asphaltic Concrete Leveling Course (60-70)
- (C) Item T-30 Bituminous Tack Coat (0.10 Gals. per 1 Sq. Yd.)
- (D) Item B-70 9" Portland Cement Concrete Base Course
- (E) Item I-22 6" Subbase
- (F) Item I-11 6" x 18" Sandstone Curb or Salvaged Curb Reset, 1" Bullnose
- (G) Item I-4 6" Pipe Underdrain (Shallow) See Detail N# 3 Sheet N# 4
- (H) Item I-13 4" Concrete Walk

## TYPICAL SECTION CODE 7221 EAST 27<sup>TH</sup> ST. RELOCATION

SCALE 1/4" = 1 FT.

EXTRA AREA QUANTITIES													
E-8 Removal & Disposal of Exist. Curb	E-8 Removal for Reuse of Exist. Curb	LOCATION	T-35 Conc. Surf. Course		B-35 Conc. Lead Course		B-70 Conc. Base Course		I-22 Subbase		I-11 Sandstone Curb		E-8 Removal & Disposal of Exist. Pavt
			Sq. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yds.			
48	51	STUBER CT. E. 27 <sup>TH</sup> ST. REL. E. 30 <sup>TH</sup>	73	143	143	143	24	1737	47.12	78.54	18		
48	51	TOTALS	73	202	202	202	34	57.37	47.12	78.54	18		

# SUPERELEVATION TABLES



**FULL SUPERELEVATION SECTION  
 STA. 20+10 TO STA. 22+00 NORTHBOUND  
 CONTINUED FROM SHEET N<sup>o</sup>**

**3°30' CURVE P.C. STA. 4+88.368 P.T. STA. 24+88.26 DESIGN SPEED 50 MPH**

	E	D	C	B	A	DATUM	STATION	A'	B'	C'	D'	
400' V.C. Full Super	636.44	637.11	637.78	638.45	639.13	639.24	21+00	637.85	638.53	639.20	639.87	400' V.C. Full Super
	636.22	636.89	637.56	638.23	638.91	639.02	+25	637.63	638.31	638.98	639.65	
	636.01	636.68	637.35	638.02	638.70	638.81	+50	637.42	638.10	638.77	639.44	
	635.82	636.49	637.16	637.83	638.51	638.62	+75	637.23	637.91	638.58	639.25	
	635.63	636.30	636.97	637.64	638.32	638.43	22+00	637.04	637.72	638.39	639.06	
	635.47	636.14	636.80	637.47	638.14	638.25	+25	636.89	637.55	638.21	638.87	
	635.34	636.00	636.65	637.32	638.06	638.07	+50	636.74	637.38	638.02	638.66	
	635.24	635.88	636.51	637.15	637.78	637.89	+75	636.60	637.22	637.83	638.44	
	635.16	635.77	636.38	637.00	637.61	637.71	23+00	636.48	637.04	637.61	638.18	
	635.10	635.68	636.27	636.85	637.43	637.53	+25	636.34	636.87	637.40	637.93	
-0.72% Transition	635.05	635.60	636.15	636.71	637.25	637.35	+50	636.21	636.70	637.19	637.68	-0.72% Transition
	634.99	635.51	636.04	636.55	637.08	637.17	+75	636.08	636.53	636.98	637.43	
	634.94	635.43	635.92	636.42	636.91	636.99	24+00	635.94	636.35	636.76	637.17	
	634.88	635.34	635.81	636.27	636.73	636.81	+25	635.81	636.18	636.55	636.92	
	634.83	635.26	635.69	636.13	636.56	636.63	+50	635.68	636.01	636.34	636.67	
	634.77	635.17	635.58	636.08	636.38	636.45	+75	635.55	635.84	636.13	636.42	
	634.72	635.09	635.46	635.84	636.21	636.27	25+00	635.41	635.66	635.91	636.16	
	634.66	635.00	635.35	635.69	636.03	636.09	+25	635.28	635.49	635.70	635.91	
	634.61	634.92	635.23	635.55	635.86	635.91	+50	635.15	635.32	635.49	635.66	
	634.56	634.84	635.12	635.40	635.68	635.78	+75	635.02	635.15	635.28	635.41	
-0.96% Normal Pavt.	634.50	634.75	635.00	635.26	635.51	635.55	26+00	634.88	634.97	635.06	635.15	-0.96%
	634.42	634.65	634.88	635.10	635.33	635.37	+25	634.75	634.80	634.85	634.90	
	634.30	634.51	634.72	634.93	635.14	635.18	+50	634.62	634.63	634.64	634.65	
	634.13	634.32	634.52	634.71	634.91	634.94	+75	634.48	634.45	634.42	634.39	
	633.92	634.11	634.30	634.49	634.67	634.70	27+00	634.35	634.28	634.21	634.14	
	633.82	634.01	634.20	634.39	634.57	634.60	27+00.27 (Back) 26+01.12 (Ahead)	634.30	634.21	634.12	634.03	
	633.69	633.88	634.07	634.26	634.44	634.47	26+75	634.23	634.12	634.00	633.89	
	633.45	633.64	633.83	634.02	634.20	634.23	27+00	634.09	633.94	633.80	633.65	
	633.21	633.40	633.59	633.78	633.96	633.99	+25	633.91	633.74	633.57	633.40	
	633.16	633.35	633.54	633.72	633.78	633.75	+50	633.70	633.52	633.34	633.16	
	632.92	633.11	633.30	633.48	633.51	+75	633.48	633.30	633.11	632.92		

6-33

EE-9

ROUTE - 42 R

SECT. 18.81

TOTAL NUMBER OF OWNERS - 144

SUMMARY OF ADDITIONAL R/W REQUIRED

3	03/01/00	REVISED COUNTY ROUTE SECTION(CRS) TO REFLECT CURRENT CRS
		RUN AROUND THAT NO LONGER EXIST
		RELEASE OF EASEMENT OF PART OF PCL 559LA
		560LA, 561LA, 562LA, 563LA, 564LA, 565LA, 566LA
		567LA, 568LA, 569LA, 570LA, 571LA, 572LA, 573LA
		574LA, 575LA, AND 577LA GIVING BACK ALL THE PROPERTY RIGHTS BACK TO THE FEE OWNER
2	07/20/62	REVISED 07/20/62 NO DESCRIPTION
1	02/17/58	REVISED 02/17/58 NO DESCRIPTION
	REV. DATE	DESCRIPTION

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

CUYAHOGA COUNTY  
 CUY-90-17.04 +/-  
 aka CUY-42-19.81  
 (aka CUY-42R18.81 (1928))  
 CUY-322-(1.08-1.39)  
 Const # 583-57



PARCEL N°	OWNER	AREA SQ. FT.	EXIST. BL'GS	SHEET N°	REMARKS
300 T	THE CLEVELAND AUTOMOBILE CLUB	13,312	---	51	
300 A	"	7,809	---	"	
300A-TS	"	9,273	---	"	
301 LA	THE CLEVELAND MUSEUM OF NATURAL HISTORY	91,333	YES	"	
302 LA	THE CLEVELAND TRUST COMPANY AND THE CENTRAL NATIONAL BANK OF CLEVELAND	99,180	---	"	
302A-LA	THE CLEVELAND TRUST CO. (TRUSTEE)	43,066	---	"	
302A-T	"	3,707	---	"	
303 LA	CLEVELAND BIBLE COLLEGE n.k.a. MALONE COLLEGE	34,941	YES	"	
304 LA	EAST 30TH APARTMENTS, INC.	112	---	"	
305	DAVID SCHONBERG, INC.	3,890	---	"	
306 LA	BEAUMONT, INC.	24,891	YES	"	
307 LA	SUSAN A. TURNBULL	13,111	YES	"	
308	FENN COLLEGE	10,423	YES	54	
308 WA	"	12,221	YES	"	
313	FENN COLLEGE	4,360	---	54	
313-WA	"	1,270	---	"	
313A	THE MOTORS REALTY COMPANY	192	---	"	
313A-WA	"	60	---	"	
314	ARTHUR G. MCKEE & COMPANY	8,827	YES	"	
314 WA	"	---	---	"	
314 WA-1	"	---	---	"	
315	PAYNE BINGHAM COMPANY	6,981	---	"	
315 WA	"	667	---	"	
316	THE COMMERCE PLAZA, INC.	9,186	---	"	
316 WA	"	822	---	"	
300T-WA	THE CLEVELAND AUTOMOBILE CLUB	---	---	51	
300T-WA-1	"	---	---	"	

PARCEL N°	OWNER	AREA SQ. FT.	EXIST. BL'GS	SHEET N°	REMARKS
400 LA	CURTIS MANUFACTURING COMPANY	73,520	YES	52	SEE 405 LA
405 LA	"	1,393	YES	52	SEE 400 LA
406 LA	GRAPHIC ARTS BUILDING CO.	1,590	---	52	SEE 431 LA
407 LA	M.G.M. REALTY, INC.	1,194	---	"	
408 LA	"	---	---	"	
409 LA	TERESA VERDELLI BENY	6,888	YES	"	SEE 436 & 438
410 LA	ALBERT H. BRAMSON	3,640	"	"	
411 LA	JAY H. BRAMSON	3,640	"	"	
412 LA	WILLIAM & ANNA INA	3,640	"	"	
413 LA	MAROON A. INA, et al.	3,640	"	"	
414 LA	LEON & ANITA LECHNER	3,640	"	"	
415 LA	JACOB & MAGDALENA KLEIN	3,640	"	"	
416 LA	MARGARET BOERIO, ET AL.	3,640	"	"	
417 LA	THEODORE EVANOFF, ET AL.	3,640	"	"	
418 LA	CHAS. J., JR. & ALMA KANTENWEIN	3,640	"	"	
419 LA	PETER A. VELLLOS, ET AL	3,640	"	"	
420 LA	LUCY GOCKEL, ET AL	3,640	"	"	
421 LA	GERALD D. ROVINELLI	3,640	"	"	
422 LA	CATHOLIC CHARITIES CORPORATION OF CLEVELAND	3,640	"	"	
423 LA	FRANCO & MARGARET PROSARIO	3,640	"	"	
424 LA	MARY MANOS	3,640	"	"	
425 LA	GEORGE T. & CLARA G. MORROW	3,640	"	"	
426 LA	DANIEL HRNYAK (MINOR)- ELLA HRNYAK (GUARDIAN)	3,640	"	"	
427 LA	WALTER J. & LORETTA M. CAMPBELL	3,640	"	"	
428 LA	EMILY LARKS n.k.a. E.L. POOLE	3,640	"	"	
429 LA	PAUL STURGEON BERRY	3,640	"	"	
430 LA	HAROLD M. SAMPSON	5,909	"	"	SEE 452 LA
431 LA	"	3,322	"	"	SEE 406 LA
432 LA	HAWKINS TRADING COMPANY	10,895	"	"	
433 LA	LOUIS & LAURA GRIMOLDI	3,634	"	"	
434 LA	AMY HANSEN	3,633	"	"	
435 LA	LINA LEONELLI	3,632	"	"	
436 LA	"	3,631	"	"	SEE 409 & 438
437 LA	JOSEF & KATIE JELESNIANSKI	3,630	"	"	
438 LA	"	3,629	"	"	SEE 409 & 436
439 LA	EMMA DELESK, n.k.a. E. ODEWALD	1,959	"	"	
440 LA	ANDREW & HELEN SKOMROCK	5,295	"	"	
441 LA	RADOSLAV NEDELJKOVIC	3,626	"	"	
442 LA	HERMANN & EMMA FANSLAU	3,172	"	"	
443 LA	MIKE & ANNA COLEMAN	3,191	"	"	
444 LA	CHRIST & LENA PETERS	3,623	"	"	
445 LA	ANTHONY E. MOTSCH	3,621	"	"	
446 LA	FOREST F. RICHARDS	3,620	"	"	
447 LA	WILLIAM A. WEBER	3,619	"	"	
448 LA	JOSEPH J. GLYNIAS	3,618	"	"	
449 LA	HAROLD A. MCGUIRE	3,617	"	"	
450 LA	JOSHUHA T. WILSON	3,616	"	"	
451 LA	HARRY J. HAPPE, JR. & H. J. HAPPE, SR.	3,615	"	"	
452 LA	"	5,341	"	"	SEE 430 LA
453 LA	RHEA & ALEX MARCUS	5,440	"	"	
454 LA	HELEN M. CURLEY	5,441	"	"	
455 LA	JOHN MILTON BERRY	5,442	"	"	
456 LA	MAY KOBERNA	5,443	"	"	
457 LA	"	5,444	"	"	
458 LA	"	5,445	"	"	
459 LA	FRANK COMISKEY	5,446	"	"	
460 LA	ZACK & HARRIS MARINAKIS	5,447	"	"	
461 LA	STELLA & PETE KAPOTTOS	5,449	"	"	
462 LA	LEIGHTON A. ROSENTHAL	10,901	"	"	
463 LA	"	---	---	"	
464 LA	VLADIMIR & WILMA MITROVIC	5,451	"	"	
465 LA	SPIRO & CATHERINE MARCOPOULUS	4,790	"	"	
466 LA	"	4,797	"	"	
467 LA	SAMUEL ROSENTHAL	3,151	"	"	
469 LA	CARL L. & ANATOLE J. DIEDRICHS	1,637	---	"	
470 LA	S.G. CO.	6,541	YES	"	
472 LA	SCHONLON REALTY COMPANY	11,971	"	"	SEE 578 T
475 LA	AUTHOR H. GANGER, ET AL.	5,720	"	"	
476 LA	"	5,720	"	"	
477 LA	MOTION PICTURE & PROJECTION MACHINE OPERATORS UNION, LOCAL 160	5,720	"	"	
478 LA	ALSTORES REALTY CORPORATION	28,600	---	"	
479 LA	ELEANORA CONNER NIEMAN	17,314	YES	"	SEE 482 LA
480 LA	HARRY TESSLER	5,771	"	"	
481 LA	OHIO COUNTING SCALE, INC.	5,771	"	"	
482 LA	"	11,542	---	"	SEE 479 LA
483 LA	PETER & MARY KRIARIS	5,771	YES	"	

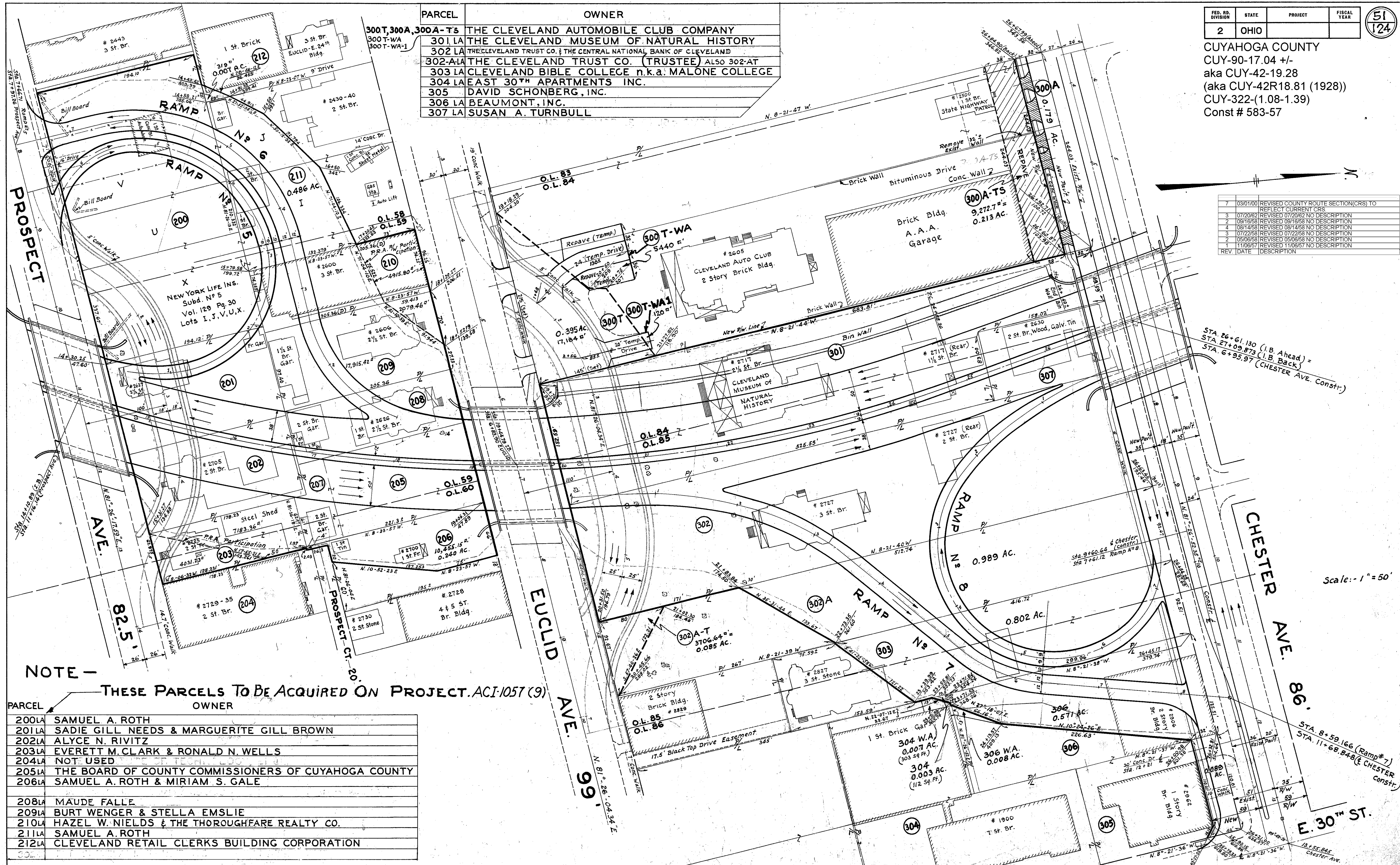
PARCEL N°	OWNER	AREA SQ. FT.	EXIST. BL'GS	SHEET N°	REMARKS
500 LA	ANNA HRISKO	3,430	YES	53	
501 LA	MARY KOLLER	3,430	"	"	
502 LA	DORIS & MARY BOLINGER	3,430	"	"	
503 LA	EVELYN STEINER	3,430	"	"	
504 LA	NICK STEFFAN	3,430	"	"	
505 LA	ELEANOR G. TETTENS	3,332	"	"	
506 LA	JOHN J. KUCHTA	1,785	"	"	
507 LA	FRANK AUGUST KROUSER	1,785	"	"	
508 LA	ANNE KALBRUNNER	1,785	"	"	
509 LA	FREDA H. SHARTZ	1,785	"	"	
510 LA	GUY EDWARD & WAN. A LEE BALL	1,785	"	"	
511 LA	LAWRENCE M. GILLES, et al	2,499	"	"	
512 LA	THE 2449 OVERLOOK COMPANY	7,131	---	"	
512 T	"	190	---	"	
513 LA	OTTO WIECZOREK & GERTRUD LICHTENFELD	3,960	YES	"	
514 LA	"	3,960	"	"	
515 LA	HAROLD A. MCGUIRE	3,960	"	"	SEE 543 LA
516 LA	RAFFAELE DICAPRIO	5,940	"	"	
517 LA	MARY DOBRICK	6,108	"	"	
519 LA	THE TEXAS COMPANY - A DELAWARE CORP.	6,014	"	"	
520 LA	STEVEN & MARY FERENCIS	495	---	"	
521 LA	PAUL & ANNA SIDARI	1,152	YES	"	
522 LA	THE BALAS COLLET MFG. CO.	3,078	---	"	
523 LA	"	4,294	YES	"	
524 LA	STEFEN & WANDA POSAVAC	5,280	"	"	
525 LA	E. FRESINA FAHLAU n.k.a. EFRAZINIA FEHLAU	3,960	"	"	
526 LA	ALBERT & BERTHA DEY	3,960	"	"	
527 LA	CHARLOTTE LUDWIG	3,960	"	"	
528 LA	JULIA MIERZEJEWSKI	3,960	"	"	
529 LA	MARCELLA MENGE	3,960	"	"	
530 LA	JOHN SKORVANEK	3,960	"	"	
531 LA	JOHN & KRISTINA HALLER	3,960	"	"	
532 LA	TLIJA & CLARA STOISAVLJEVICH	3,960	"	"	
533 LA	ANNA & ANGELO BENSI	4,017	"	"	
534 LA	US TRUCK LINES INC., OF DELAWARE	11,276	"	"	
534 T	"	23,950	"	"	
535 LA	STANLEY J. ZORKO, ET AL	5,296	"	"	
536 LA	AUGUST FEHLAU	3,960	"	"	
537 LA	WALTER & CATHERINE CAPLICK	3,960	"	"	
538 LA	JOHN A. & PAULINE SCHULTZ	3,960	"	"	SEE 553 & 573
539 LA	ANNA E. & MICHAEL JOHN HUBAY	3,960	"	"	
540 LA	ANNA DANCULOVIC	3,960	"	"	
541 LA	"	3,960	"	"	
542 LA	ANNA JOHNS	3,960	---	"	SEE 445 LA
543 LA	"	3,960	YES	"	SEE 515 LA
544 LA	PETER N. & MARY A. BUKVIC	3,960	"	"	
545 LA	KARLENA K. GRAHLING & ANNA M. MARSHALL	4,092	"	"	SEE 554 LA
546 LA	"	3,828	"	"	
547 LA	MAUDE A. CARROLL	3,960	"	"	
548 LA	RUTH I. OSBORNE, n.k.a. R.I. SCHLICHER	3,960	"	"	
549 LA	JULIET L. & RUTH E. HARMS	3,960	"	"	
550 LA	"	3,960	"	"	
551 LA	JOSEPH & THERESA KORDIS	3,960	"	"	
552 LA	CORNELIA SARBACH	3,960	"	"	
553 LA	"	3,960	"	"	SEE 538
554 LA	"	3,623	"	"	SEE 545 LA
555 LA	THE MOST REVEREND - EDWARD F. HOBAN	32,219	"	"	
556 LA	CHARLES J. & JOSEPHINE M. SABOT	2,622	"	"	
557 LA	B. H. G. PROPERTIES COMPANY	4,860	"	"	
558 LA	JAMES R. ANDERSON	10,941	"	"	
559 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 9021 Pg. 62
560 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 9021 Pg. 64
561 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 9060 Pg. 376
562 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 9039 Pg. 655
563 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Case # 70347
564 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 9039 Pg. 657
565 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 9060 Pg. 378
566 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	YES	"	Vol. 8866 Pg. 563
567 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 8866 Pg. 565
568 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 8847 Pg. 235
569 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 8847 Pg. 233
570 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 8847 Pg. 230
571 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 8866 Pg. 567
572 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 9039 Pg. 659
573 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 9039 Pg. 661
574 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 8847 Pg. 227
575 LA	RELEASE OF EASEMENT 09/1997 VOL. 97-08939 Pg. 10	"	"	"	Vol. 8847 Pg. 225
576 LA	THE WOODSTER AVENUE REALTY CO.	616	"	"	
577 LA	J. A. GIDEON	8,194	"	"	
578 T	"	7,461	YES	"	SEE 472 LA
579 T	CHRIST LUTHERAN CHURCH (EAST SIDE), INC.	646	---	"	
581 LA	GEORGE A. MOONEYHAM, ET AL.	165	"	"	

SUMMARY OF ADDITIONAL R/W REQUIRED

CUYAHOGA COUNTY  
 CUY-90-17.04 +/-  
 aka CUY-42-19.28  
 (aka CUY-42R18.81 (1928))  
 CUY-322-(1.08-1.39)  
 Const # 583-57

7	03/01/00	REVISED COUNTY ROUTE SECTION(CRS) TO REFLECT CURRENT CRS
3	07/20/62	REVISED 07/20/62 NO DESCRIPTION
2	09/16/58	REVISED 09/16/58 NO DESCRIPTION
4	08/14/58	REVISED 08/14/58 NO DESCRIPTION
3	07/23/58	REVISED 07/23/58 NO DESCRIPTION
2	05/05/58	REVISED 05/05/58 NO DESCRIPTION
1	11/06/57	REVISED 11/06/57 NO DESCRIPTION
REV	DATE	DESCRIPTION

PARCEL	OWNER
300T,300A,300A-T3	THE CLEVELAND AUTOMOBILE CLUB COMPANY
301LA	THE CLEVELAND MUSEUM OF NATURAL HISTORY
302LA	THE CLEVELAND TRUST CO. & THE CENTRAL NATIONAL BANK OF CLEVELAND
302-A1A	THE CLEVELAND TRUST CO. (TRUSTEE) ALSO 302-AT
303LA	CLEVELAND BIBLE COLLEGE n.k.a. MALONE COLLEGE
304LA	EAST 30TH APARTMENTS INC.
305	DAVID SCHONBERG, INC.
306LA	BEAUMONT, INC.
307LA	SUSAN A. TURNBULL



NOTE - THESE PARCELS TO BE ACQUIRED ON PROJECT ACI-1057 (9)

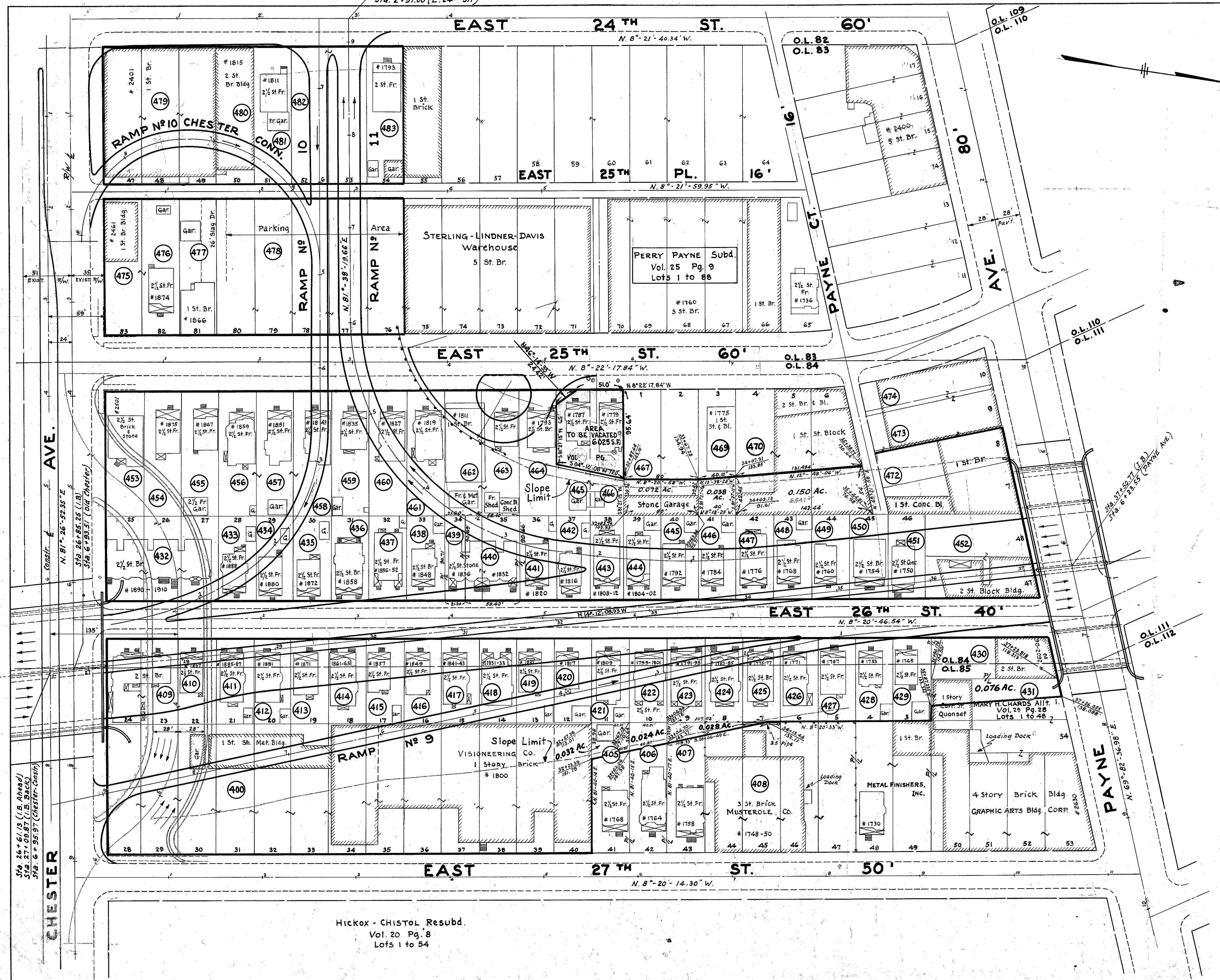
PARCEL	OWNER
200LA	SAMUEL A. ROTH
201LA	SADIE GILL NEEDS & MARGUERITE GILL BROWN
202LA	ALYCE N. RIVITZ
203LA	EVERETT M. CLARK & RONALD N. WELLS
204LA	NOT USED
205LA	THE BOARD OF COUNTY COMMISSIONERS OF CUYAHOGA COUNTY
206LA	SAMUEL A. ROTH & MIRIAM S. GALE
208LA	MAUDE FALLE
209LA	BURT WENGER & STELLA EMSLIE
210LA	HAZEL W. NIELDS & THE THOROUGHFARE REALTY CO.
211LA	SAMUEL A. ROTH
212LA	CLEVELAND RETAIL CLERKS BUILDING CORPORATION

CUYAHOGA COUNTY  
 CUY-90-17.04 +/-  
 aka CUY-42-19.28  
 (aka CUY-42R18.81 (1928))  
 CUY-322-(1.08-1.39)

PARCEL No. OWNER Const # 583-57

400	CURTIS MANUFACTURING COMPANY
405	CURTIS MANUFACTURING COMPANY
406	GRAPHIC ARTS BUILDING CO.
407	M.G.M. REALTY INC.
408	
409	TERESA VERDELLI BENY
410	ALBERT H. BRAMSON
411	JAY H. BRAMSON
412	WILLIAM INA & ANNA INA
413	MAROON A. INA, et al.
414	LEON LECHNER & ANITA LECHNER
415	JACOB KLEIN & MAGDALENA KLEIN
416	MARGARET BOERIO, ET AL.
417	THEODORE EVANOFF, ET AL.
418	CHARLES J. KANTENWEIN, JR. & ALMA KANTENWEIN
419	PETER A. VELLO, ET AL.
420	LUCY GOCKEL, ET AL.
421	GERALD D. ROVINELLI
422	CATHOLIC CHARITIES CORPORATION OF CLEVELAND
423	FRANCO PROSARIO & MARGARET PROSARIO
424	MARY MANOS
425	GEORGE T. MORROW & CLARA G. MORROW
426	DANIEL HRNYAK (MINOR) & ELLA HRNYAK (GUARDIAN)
427	WALTER J. CAMPBELL & LORETTA M. CAMPBELL
428	EMILY LARKS, n.k.a. E.L. POOLE
429	PAUL STURGEON BERRY
430	HAROLD M. SAMPSON
431	THE GRAPHIC ARTS BUILDING COMPANY
432	HAWKINS TRADING COMPANY
433	LOUIS GRIMOLDI & LAURA GRIMOLDI
434	AMY HANSEN
435	LINA LEONELLI
436	TERESA VERDELLI BENY
437	JOSEF JELESNIANSKI & KATIE JELESNIANSKI
438	TERESA VERDELLI BENY
439	EMMA DELESK, n.k.a. E. ODEWALT
440	ANDREW SKOMROCK & HELEN SKOMROCK
441	RADOSLAV NEDELJKOVIC
442	HERMANN FANSLAU & EMMA FANSLAU
443	MIKE COLEMAN & ANNA COLEMAN
444	CHRIST PETERS & LENA PETERS
445	ANTHONY E. MOTSCH
446	FOREST F. RICHARDS
447	WILLIAM A. WEBER
448	JOSEPH J. GLYNIAS
449	HAROLD A. MCGUIRE
450	JOSHUA T. WILSON
451	HARRY J. HAPPE, JR. & H.J. HAPPE, SR.
452	HAROLD M. SAMPSON
453	RHEA MARCUS & ALEX MARCUS
454	HELEN M. CURLEY
455	JOHN MILTON BERRY
456	MAE A. KOBERNA
457	"
458	"
459	FRANK COMISKEY
460	ZACK MARINAKIS & HARRIS MARINAKIS
461	STELLA KAPOTTOS & PETE KAPOTTOS
462	LEIGHTON A. ROSENTHAL
463	"
464	VLADIMIR MITROVIC & WILMA MITROVIC
465	SPIRO MARCOPOULUS & CATHERINE MARCOPOULUS
466	"
467	SAMUEL ROSENTHAL
469	CARL L. DIEDRICHS & ANATOLE J. DIEDRICHS
470	S.G. CO.
472	SCHONLON REALTY COMPANY
473	NOT REQUIRED
474	"
475	AUTHOR H. GANGER, ET AL.
476	"
477	MOTION PICTURE & PROJECTION MACHINE OPERATORS UNION, LOCAL 160
478	ALSTORES REALTY CORPORATION
479	ELEANORA CONNER NIEMAN
480	HARRY TESSLER
481	OHIO COUNTING SCALE, INC.
482	ELEANORA CONNER NIEMAN
483	PETER KRIARIS & MARY KRIARIS

ALL PARCELS ON THIS SHEET TO BE LIMITED ACCESS

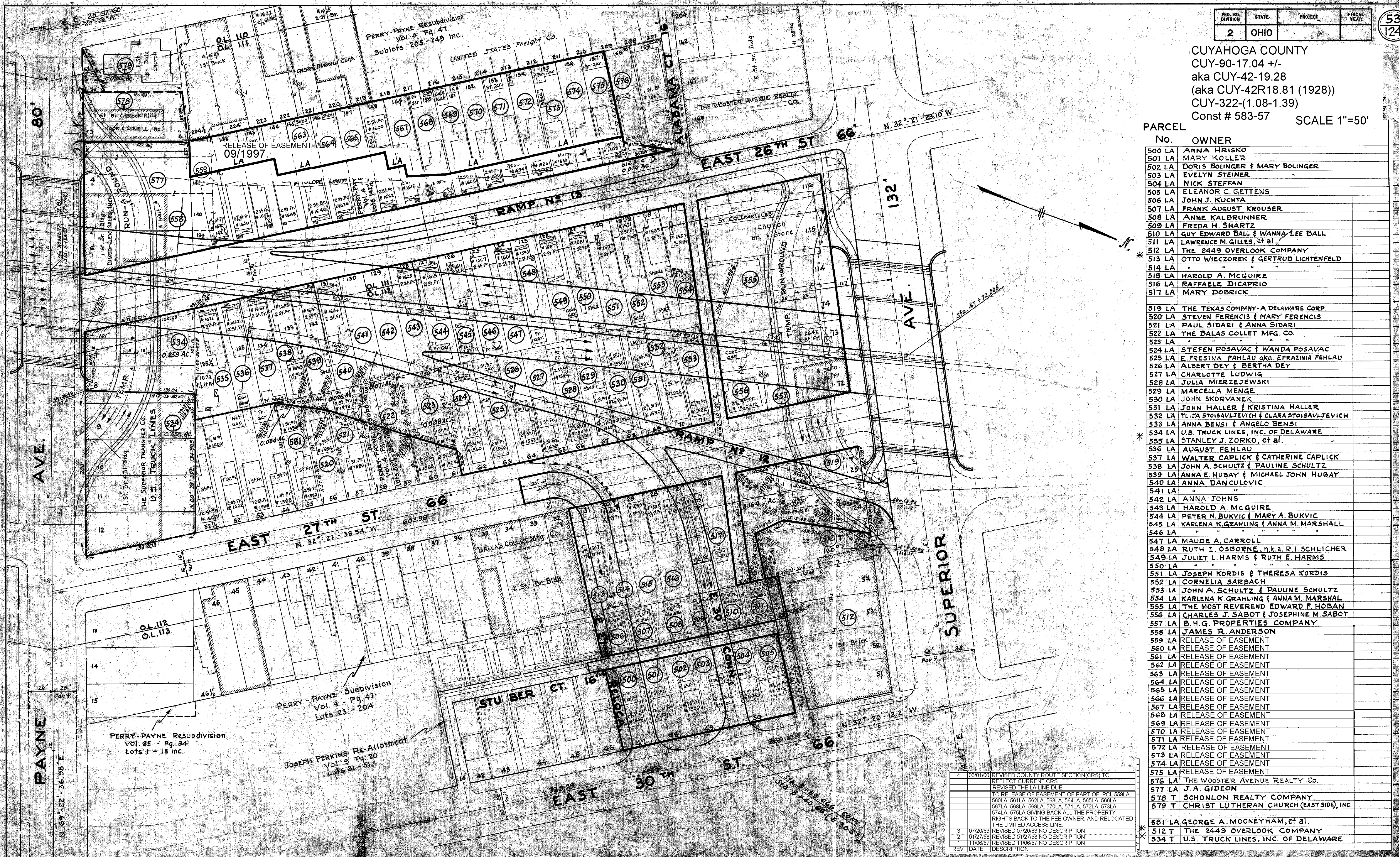


Hickox - CHISTOL Resubd.  
 Vol. 20 Pg. 8  
 Lots 1 to 54

Scale: 1" = 50'

4	03/01/00	REVISED COUNTY ROUTE SECTION (CRS) TO REFLECT CURRENT CRS
3	07/20/82	REVISED 07/20/82 NO DESCRIPTION
2	02/17/58	REVISED 02/17/58 NO DESCRIPTION
1	12/10/57	REVISED 12/10/57 NO DESCRIPTION
	REV. DATE	DESCRIPTION

CUYAHOGA COUNTY  
 CUY-90-17.04 +/-  
 aka CUY-42-19.28  
 (aka CUY-42R18.81 (1928))  
 CUY-322-(1.08-1.39)  
 Const # 583-57 SCALE 1"=50'



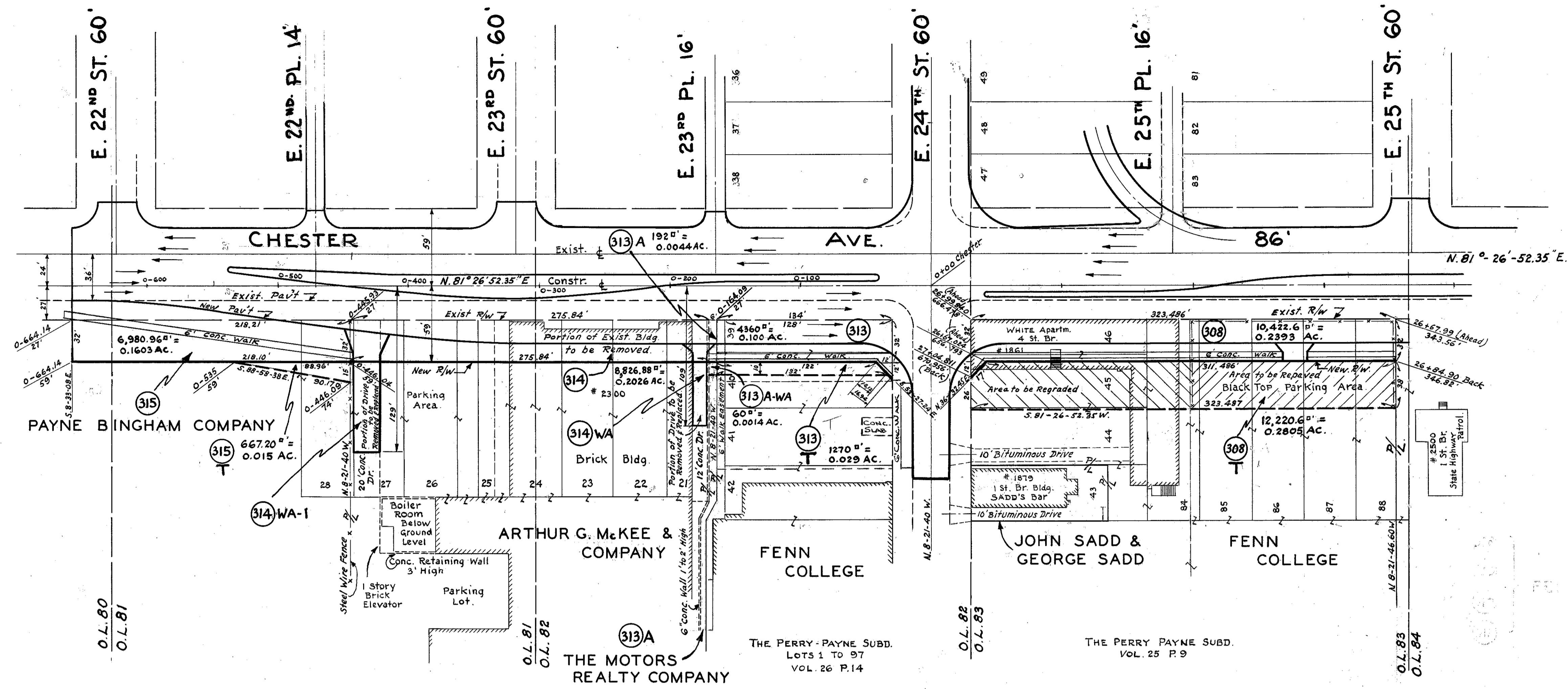
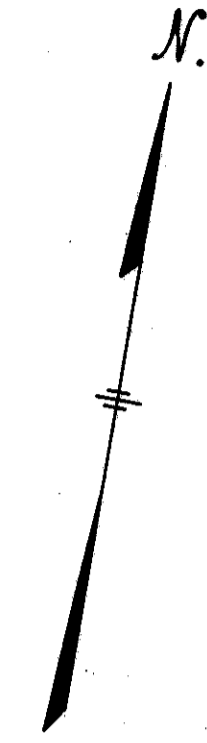
No.	OWNER
500 LA	ANNA HRISKO
501 LA	MARY KOLLER
502 LA	DORIS BOLINGER & MARY BOLINGER
503 LA	EVELYN STEINER
504 LA	NICK STEFFAN
505 LA	ELEANOR C. GETTENS
506 LA	JOHN J. KUCHTA
507 LA	FRANK AUGUST KROUSER
508 LA	ANNE KALBRUNNER
509 LA	FREDA H. SHARTZ
510 LA	GUY EDWARD BALL & WANNA LEE BALL
511 LA	LAWRENCE M. GILLES, et al.
512 LA	THE 2449 OVERLOOK COMPANY
513 LA	OTTO WIECZOREK & GERTRUD LICHTENFELD
514 LA	"
515 LA	HAROLD A. MCGUIRE
516 LA	RAFFAELE DICAPRIO
517 LA	MARY DOBRICK
519 LA	THE TEXAS COMPANY-A DELAWARE CORP.
520 LA	STEVEN FERENCIS & MARY FERENCIS
521 LA	PAUL SIDARI & ANNA SIDARI
522 LA	THE BALAS COLLET MFG. CO.
523 LA	"
524 LA	STEFEN POSAVAC & WANDA POSAVAC
525 LA	E. FRESINA FAHLAU aka EFRAZINIA FEHLAU
526 LA	ALBERT DEY & BERTHA DEY
527 LA	CHARLOTTE LUDWIG
528 LA	JULIA MIERZEJEWski
529 LA	MARCELLA MENGE
530 LA	JOHN SKORVANEK
531 LA	JOHN HALLER & KRISTINA HALLER
532 LA	TLIJA STOISAVLJEVICH & CLARA STOISAVLJEVICH
533 LA	ANNA BENSI & ANGELO BENSI
534 LA	U.S. TRUCK LINES, INC. OF DELAWARE
535 LA	STANLEY J. ZORKO, et al.
536 LA	AUGUST FEHLAU
537 LA	WALTER CAPLICK & CATHERINE CAPLICK
538 LA	JOHN A. SCHULTZ & PAULINE SCHULTZ
539 LA	ANNA E. HUBAY & MICHAEL JOHN HUBAY
540 LA	ANNA DANCULOVIC
541 LA	"
542 LA	ANNA JOHNS
543 LA	HAROLD A. MCGUIRE
544 LA	PETER N. BUKVIC & MARY A. BUKVIC
545 LA	KARLENA K. GRAHLING & ANNA M. MARSHALL
546 LA	"
547 LA	MAUDE A. CARROLL
548 LA	RUTH I. OSBORNE, n.k.a. R.J. SCHLICHER
549 LA	JULIET L. HARMS & RUTH E. HARMS
550 LA	"
551 LA	JOSEPH KORDIS & THERESA KORDIS
552 LA	CORNELIA SARBACH
553 LA	JOHN A. SCHULTZ & PAULINE SCHULTZ
554 LA	KARLENA K. GRAHLING & ANNA M. MARSHALL
555 LA	THE MOST REVEREND EDWARD F. HOBAN
556 LA	CHARLES J. SABOT & JOSEPHINE M. SABOT
557 LA	B. H. G. PROPERTIES COMPANY
558 LA	JAMES R. ANDERSON
559 LA	RELEASE OF EASEMENT
560 LA	RELEASE OF EASEMENT
561 LA	RELEASE OF EASEMENT
562 LA	RELEASE OF EASEMENT
563 LA	RELEASE OF EASEMENT
564 LA	RELEASE OF EASEMENT
565 LA	RELEASE OF EASEMENT
566 LA	RELEASE OF EASEMENT
567 LA	RELEASE OF EASEMENT
568 LA	RELEASE OF EASEMENT
569 LA	RELEASE OF EASEMENT
570 LA	RELEASE OF EASEMENT
571 LA	RELEASE OF EASEMENT
572 LA	RELEASE OF EASEMENT
573 LA	RELEASE OF EASEMENT
574 LA	RELEASE OF EASEMENT
575 LA	RELEASE OF EASEMENT
576 LA	THE WOOSTER AVENUE REALTY Co.
577 LA	J. A. GIDEON
578 T	SCHONLON REALTY COMPANY
579 T	CHRIST LUTHERAN CHURCH (EAST SIDE), INC.
581 LA	GEORGE A. MOONEYHAM, et al.
512 T	THE 2449 OVERLOOK COMPANY
534 T	U.S. TRUCK LINES, INC. OF DELAWARE

4	03/01/00	REVISED COUNTY ROUTE SECTION(CRS) TO REFLECT CURRENT CRS
		REVISED THE LA LINE DUE
		TO RELEASE OF EASEMENT OF PART OF PCL 569LA
		560LA, 561LA, 562LA, 563LA, 564LA, 565LA, 566LA, 567LA, 568LA, 569LA, 570LA, 571LA, 572LA, 573LA, 574LA, 575LA GIVING BACK ALL THE PROPERTY RIGHTS BACK TO THE FEE OWNER AND RELOCATED THE LIMITED ACCESS LINE
3	07/20/83	REVISED 07/20/83 NO DESCRIPTION
2	07/27/83	REVISED 07/27/83 NO DESCRIPTION
1	11/06/57	REVISED 11/06/57 NO DESCRIPTION
REV	DATE	DESCRIPTION

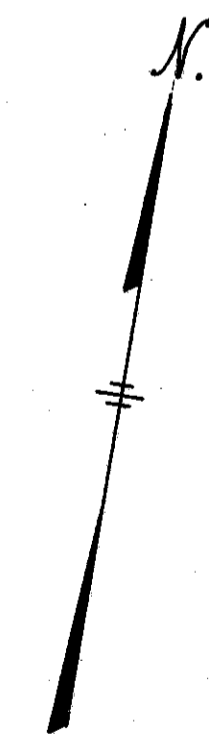
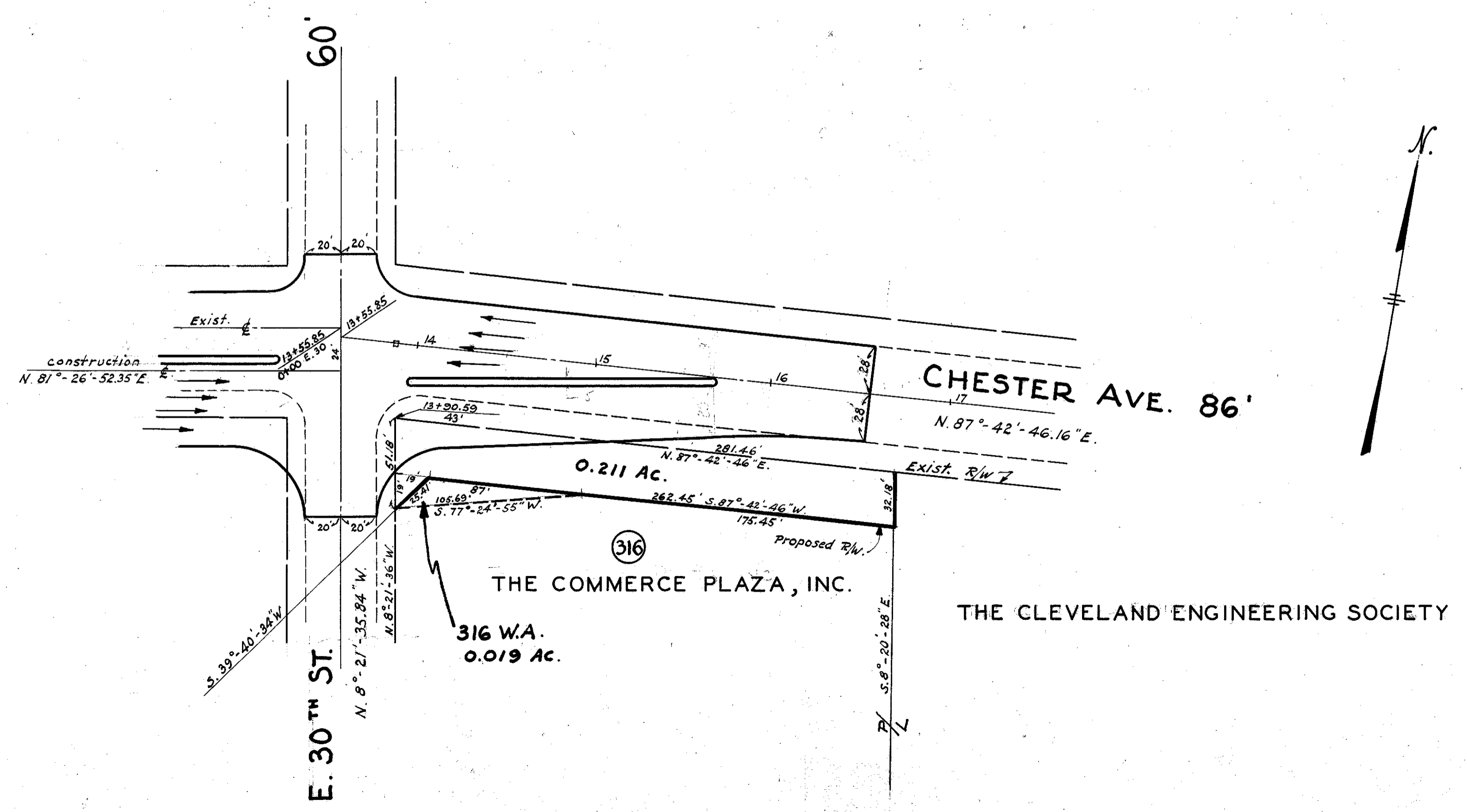
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

54  
124

CUYAHOGA COUNTY  
 CUY-90-17.04 +/-  
 aka CUY-42-19.28  
 (aka CUY-42R18.81 (1928))  
 CUY-322-(1.08-1.39)  
 Const # 583-57



Revised 4/15/59 Parcels 308-T, 313-T & 315-T



1	03/01/00	REVISED COUNTY ROUTE SECTION(CRS) TO REFLECT CURRENT CRS
REV.	DATE	DESCRIPTION

Scale: - 1" = 50'

RIGHT-OF-WAY CHESTER AVE.

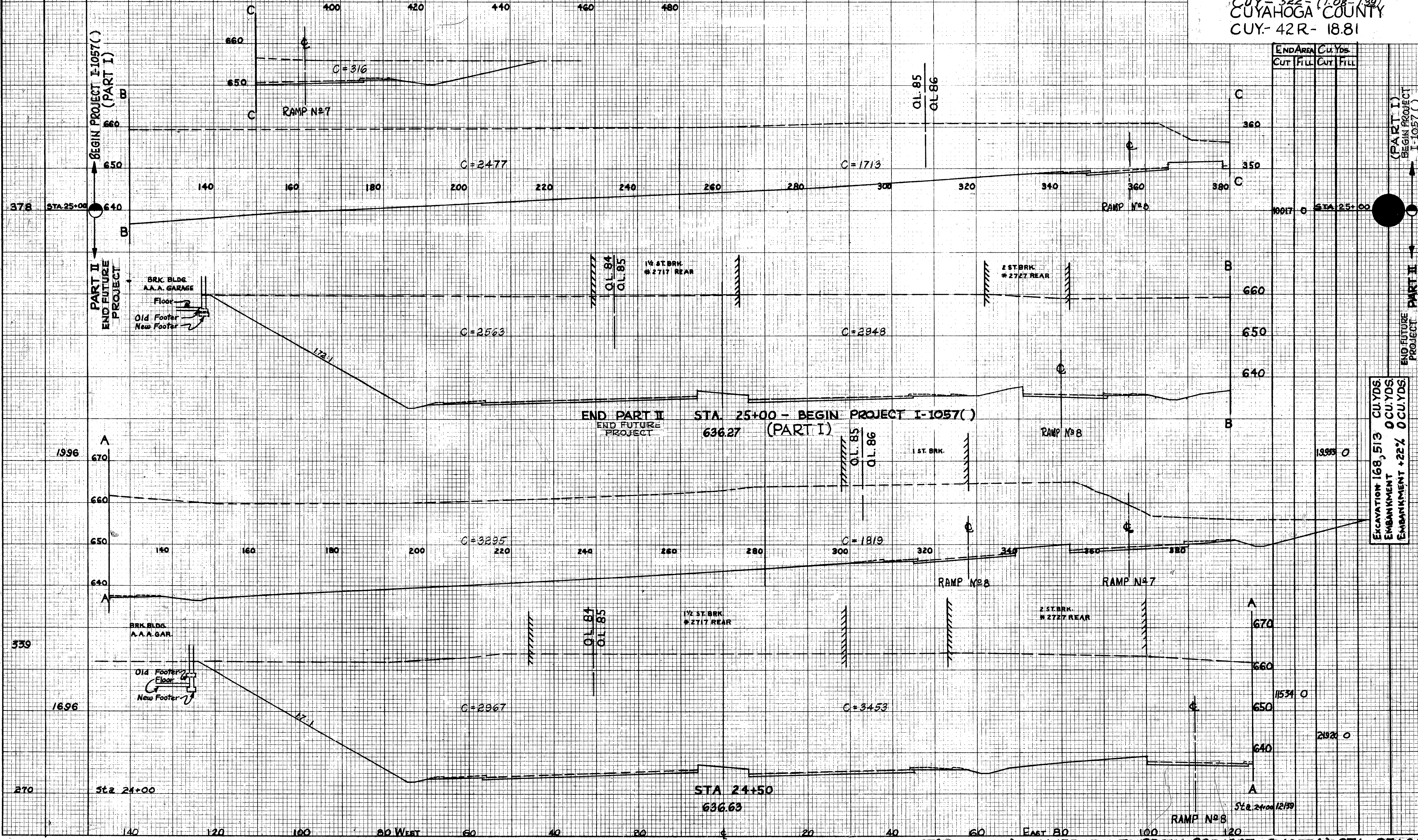
Q-18  
#10

CUY-90-17.25 ±  
CUY-322-(1.08-1.39)  
CUY-42R-18.81

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

55  
124

SEEDING	SODDING
WIDTH	AREA
LN. FT.	SQ. YDS.



END AREA	CU. YDS.	
	CUT	FILL

(PART I)  
BEGIN PROJECT  
I-1057( )

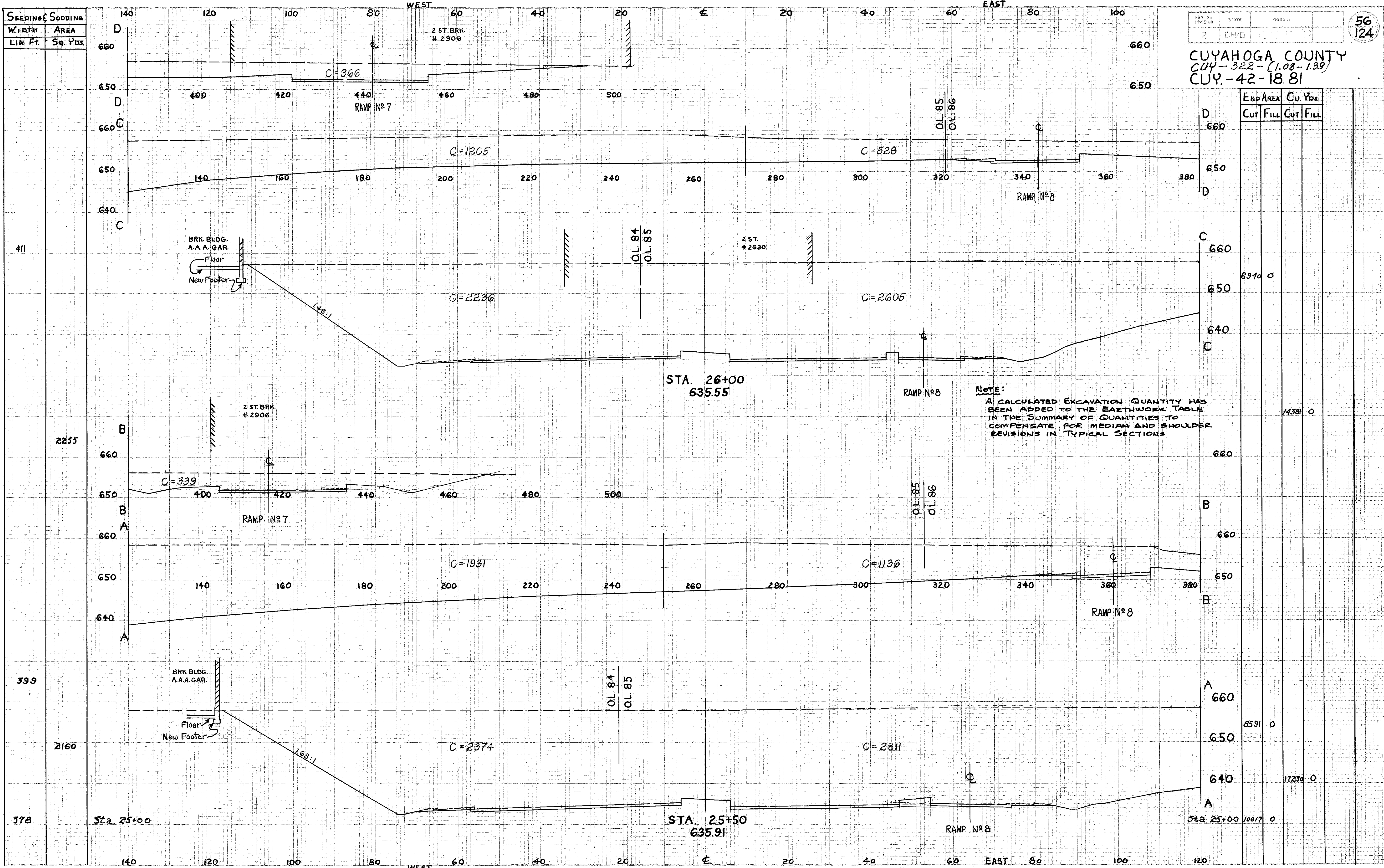
Excavation 168,513 CU. YDS.  
EMBANKMENT 0 CU. YDS.  
EMBANKMENT +22% 0 CU. YDS.

(PART I) INNER BELT-BEGIN PROJECT-I-1057( ) STA. 25+00



SEEDING	SODDING
WIDTH	AREA
LIN. FT.	Sq. Yds.

CUYAHOGA COUNTY  
CUY-322-(1.08-1.39)  
CUY-42-18.81



**NOTE:**  
A CALCULATED EXCAVATION QUANTITY HAS BEEN ADDED TO THE EARTHWORK TABLE IN THE SUMMARY OF QUANTITIES TO COMPENSATE FOR MEDIAN AND SHOULDER REVISIONS IN TYPICAL SECTIONS

END AREA	CU. Yds.	
	CUT	FILL
660		
650		
640		
630		
620		
610		
600		
590		
580		
570		
560		
550		
540		
530		
520		
510		
500		
490		
480		
470		
460		
450		
440		
430		
420		
410		
400		
390		
380		
370		
360		
350		
340		
330		
320		
310		
300		
290		
280		
270		
260		
250		
240		
230		
220		
210		
200		
190		
180		
170		
160		
150		
140		
130		
120		
110		
100		
90		
80		
70		
60		
50		
40		
30		
20		
10		
0		

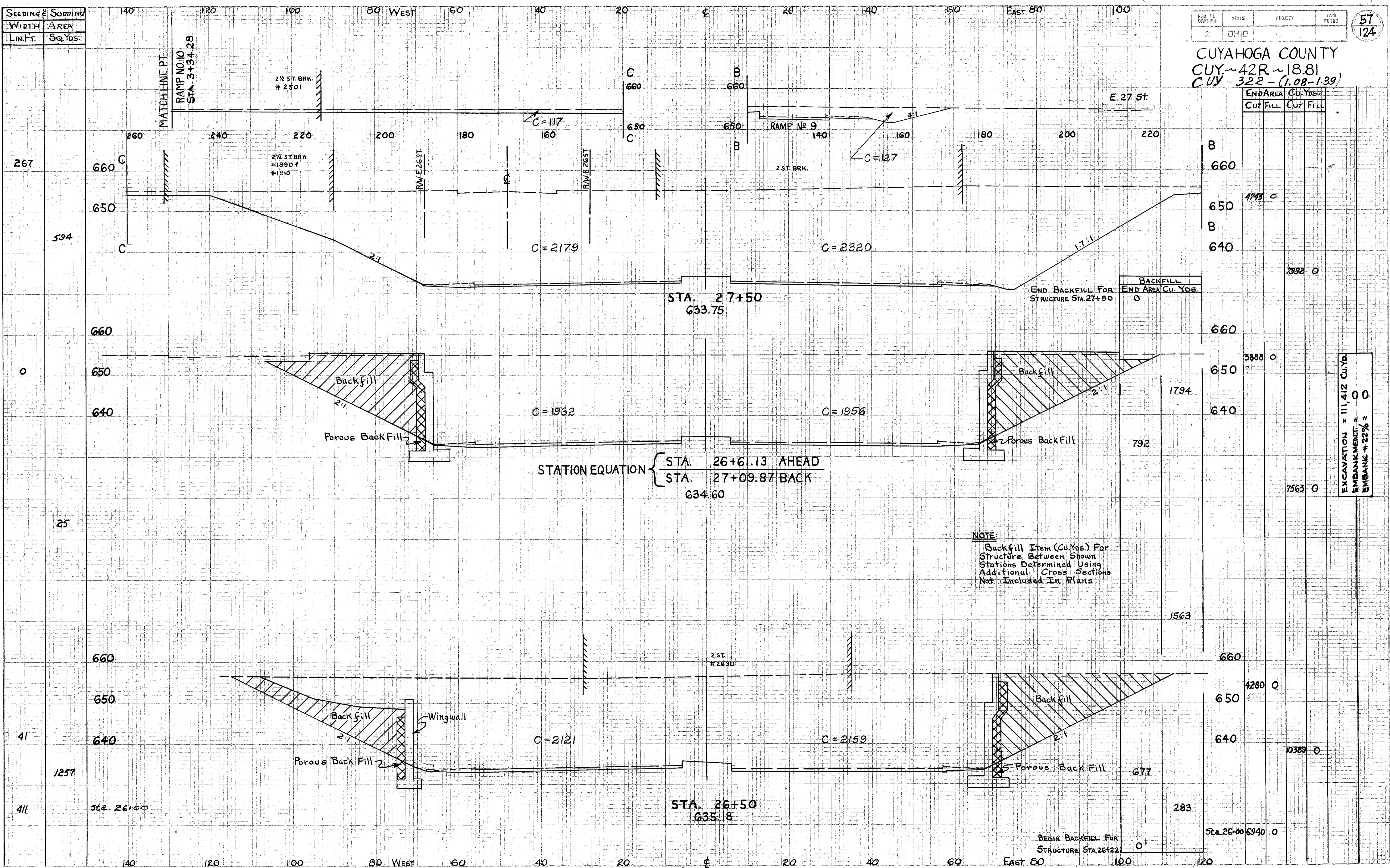
INNER BELT STA. 25+50 To STA. 26+00

SEEDING & SODDING	WIDTH	AREA
	LINE FT.	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

57  
124

CUYAHOGA COUNTY  
 CUY-42R-18.81  
 CUY-322-(1.08-1.39)



END AREA	Cu. Yds.
CUT	FILL
	4743
	2392
	3888
	1794
	792
	7563
	1563
	4280
	10389
	677
	283
	6940

EXCAVATION = 11,412 Cu.Yd  
 EMBANKMENT = 0  
 EMBANK + 22% = 0

NOTE:  
 Backfill Item (Cu.Yds.) For Structure Between Shown Stations Determined Using Additional Cross Sections Not Included In Plans.

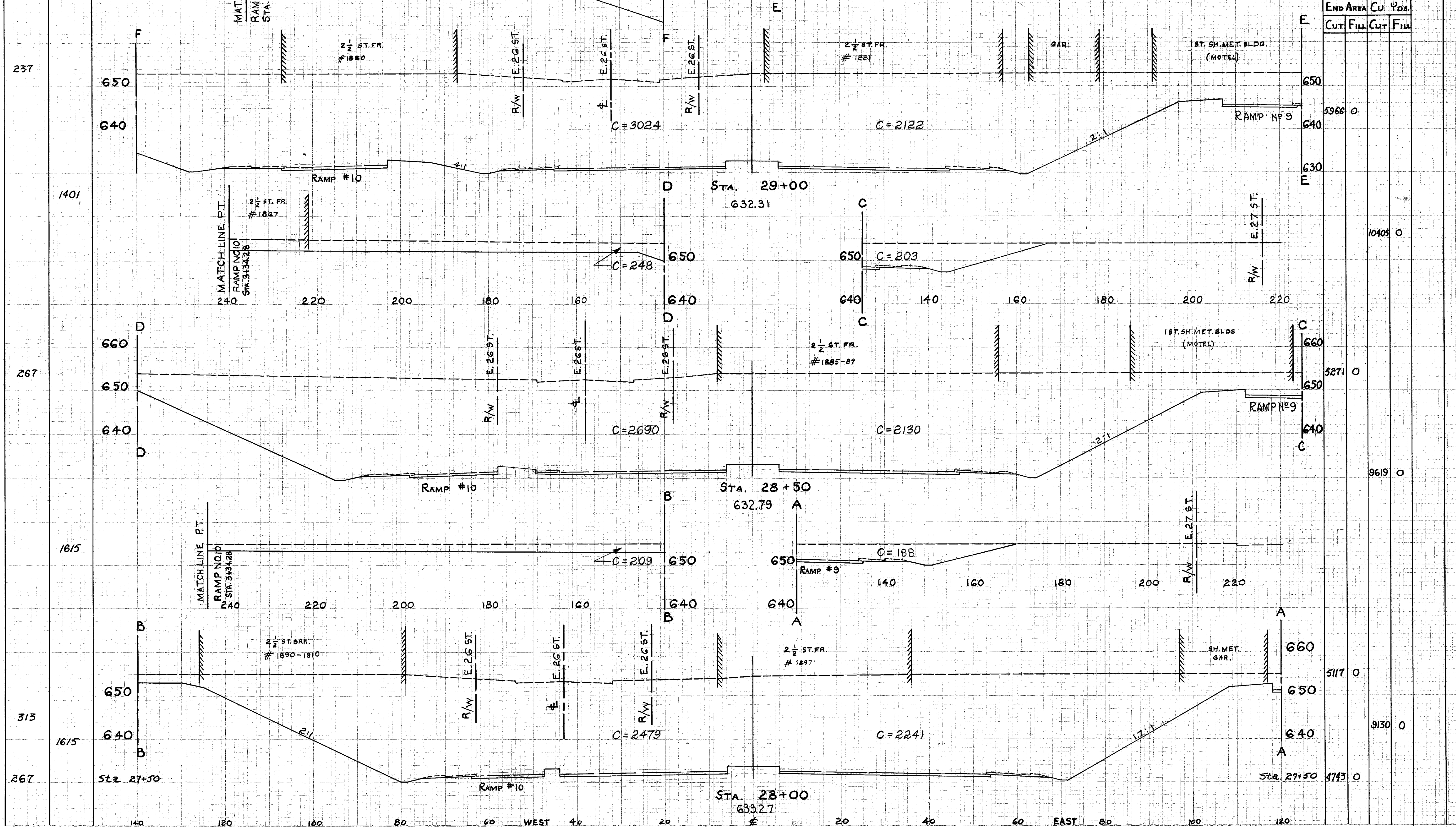
INNER BELT ~ STA 26+50 To STA 27+50

SEEDING	SODDING
WIDTH LIN. FT.	AREA Sq. Yds.

2	OHIO	
---	------	--

58  
124

CUYAHOGA COUNTY  
CUY-322-(1.08-1.39)  
CUY-42-18.81

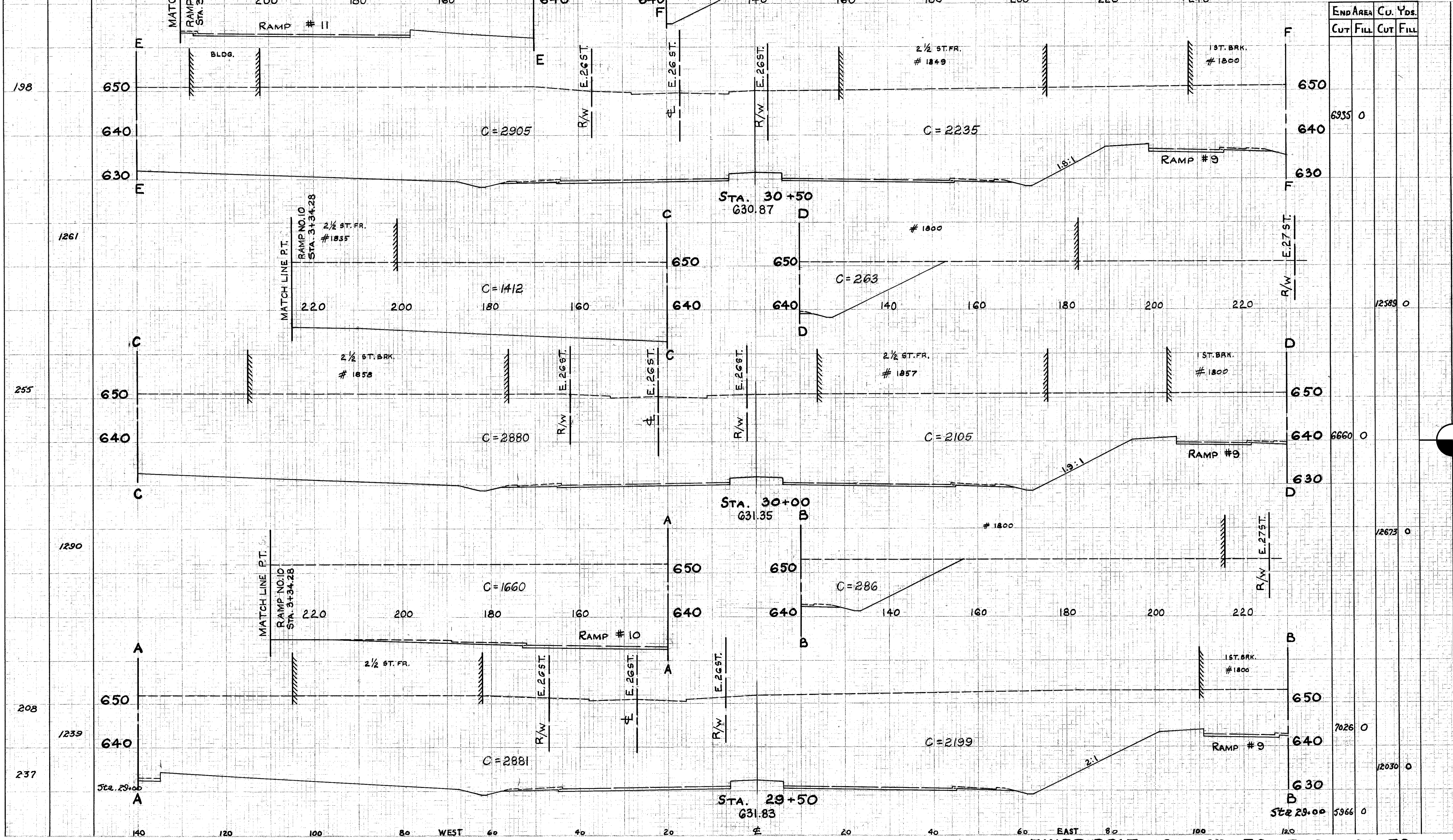


END AREA	CU. YDS.	
	CUT	FILL
650		
640	5968	0
630		
650		
640		10405
660		
650		5271
640		
660		
650		9619
640		
660		
650		5117
640		
660		
650		9130
640		
660		
650		4743

INNER BELT STA. 28+00 To STA. 29+00

SEEDING	SODDING
WIDTH	AREA
Lin. Ft.	Sq. Yds.

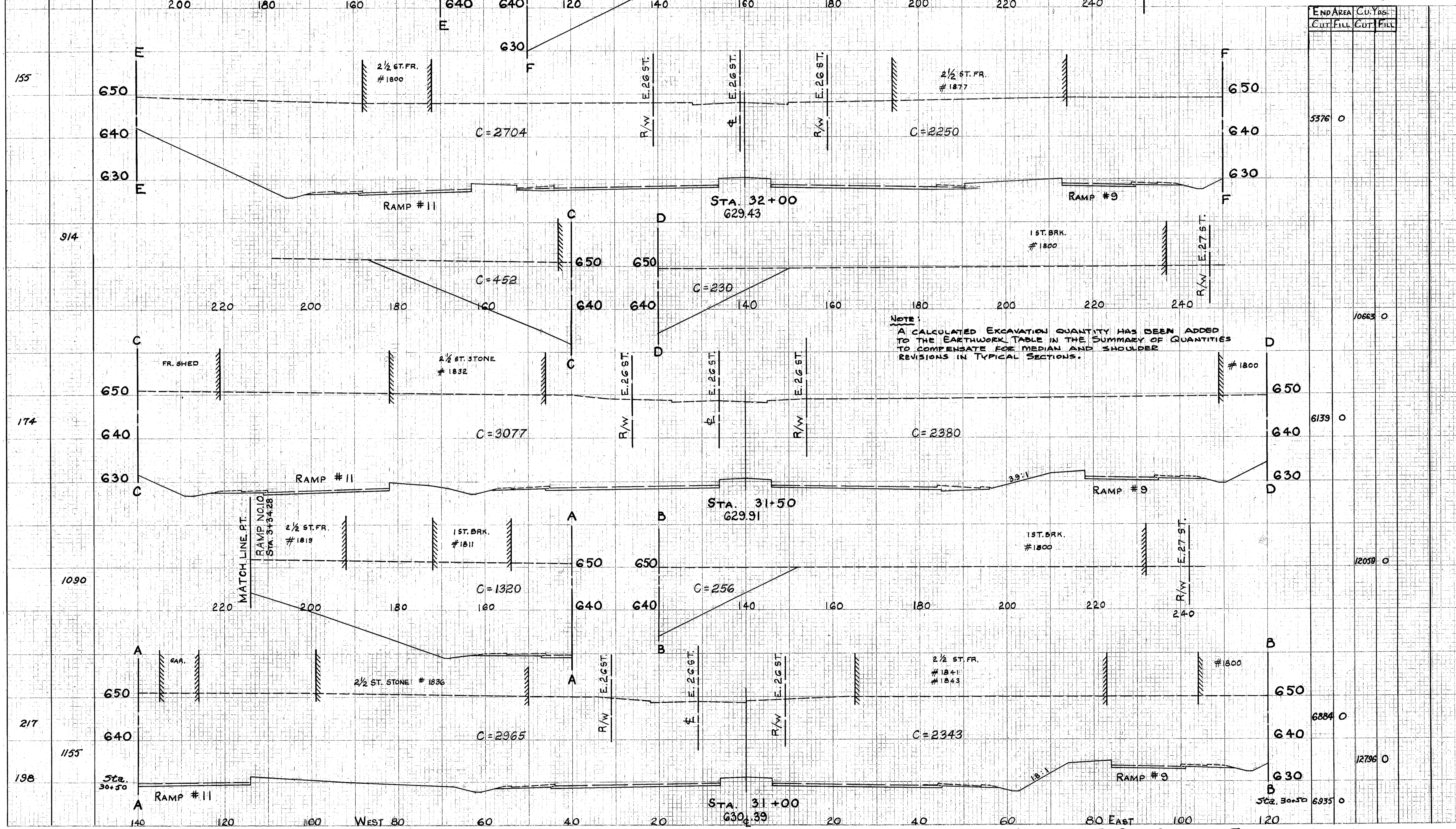
CUYAHOGA COUNTY  
 CUY-322-(1.08-1.39)  
 CUY-42-18.81



END AREA	Cu. Yds.	
	CUT	FILL
6935	0	
12589	0	
6660	0	
12673	0	
7026	0	
12030	0	
5966	0	

INNER BELT STA. 29+50 To STA. 30+50

SEEDING	SODDING
WIDTH	AREA
LIN. FT.	SQ. YDS.



END AREA	Cu. Yds.
CUT	FILL

155	5376	0
914	10663	0
174	6139	0
1090	12058	0
217	6884	0
1155	12796	0
198	6935	0

INNER BELT~ STA 31+00 To STA 32+00

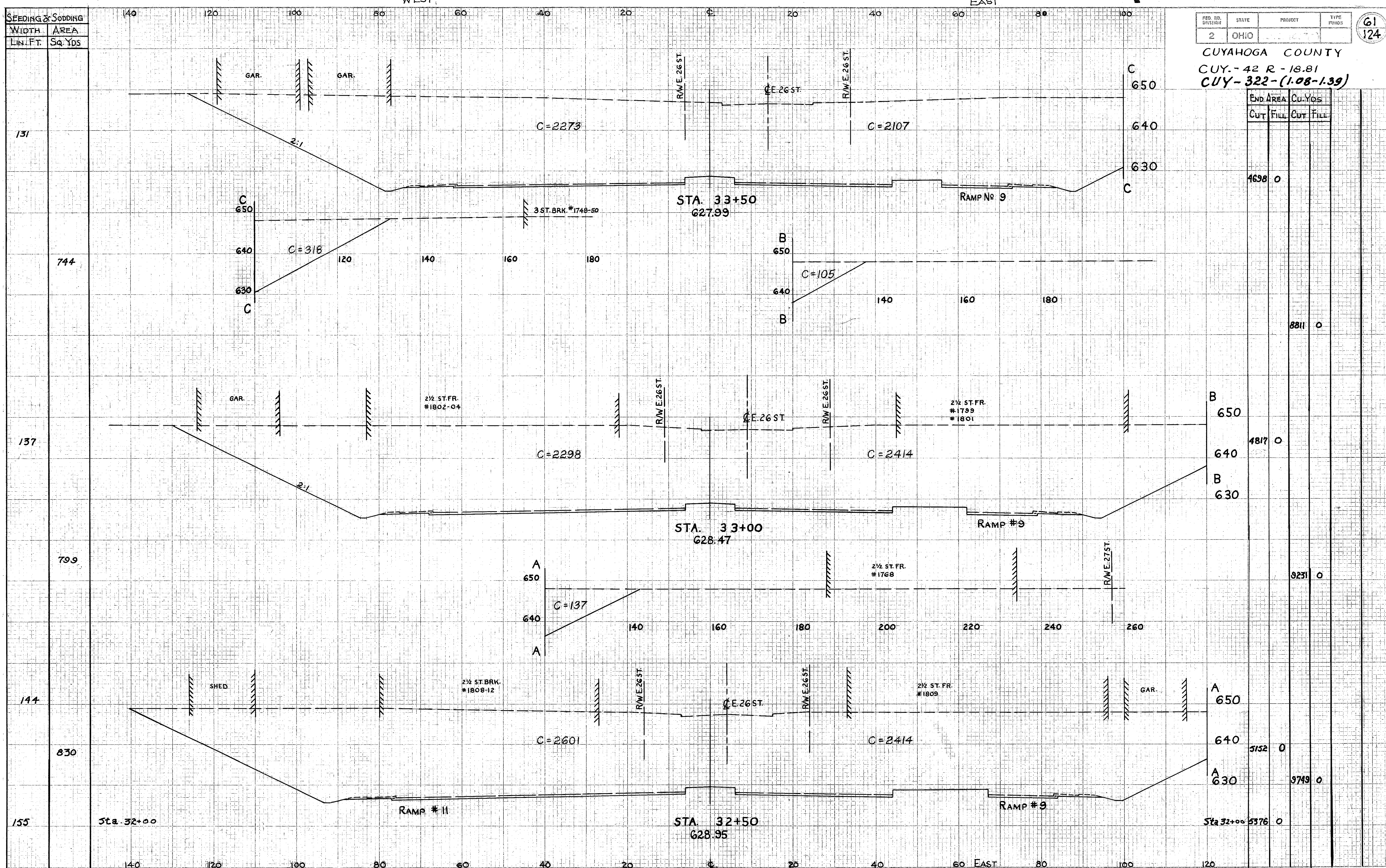
SEEDING & SODDING	
WIDTH	AREA
LN. FT.	Sq. YDS.

FED. DIST.	STATE	PROJECT	TYPE
2	OHIO		FUNDS

61  
124

CUYAHOGA COUNTY  
CUY.-42 R-18.81  
CUY-322-(1.08-1.39)

END AREA	CU. YDS.
CUT	FILL



END AREA	CU. YDS.
CUT	FILL
131	4698 0
137	8811 0
144	4817 0
155	9231 0
Sta. 32+00	5152 0
Sta. 32+00	9749 0
Sta. 32+00	5376 0

INNER BELT STA 32+50 To STA 33+50

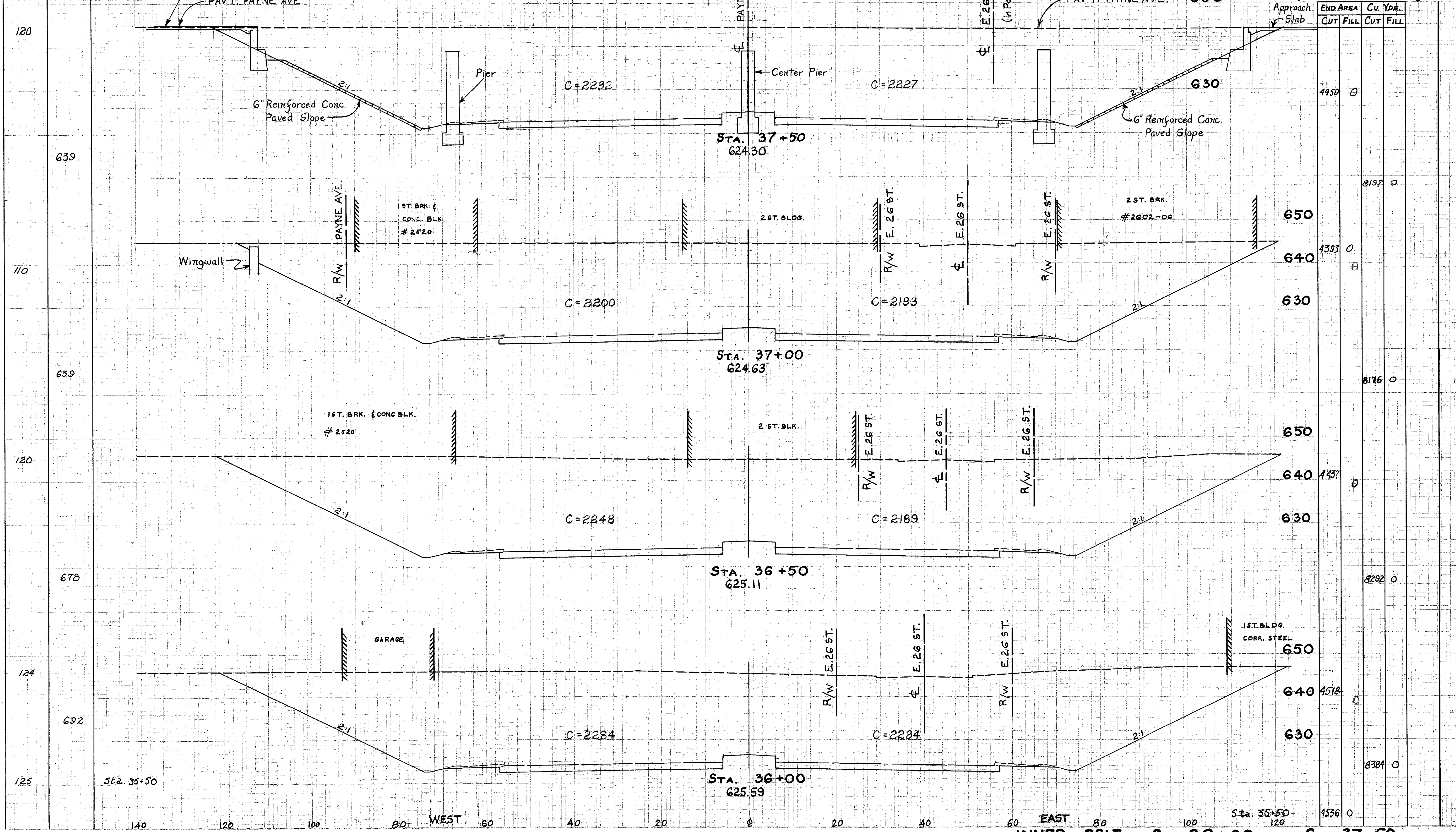


SEEDING & SODDING	WIDTH	AREA
	LIN. FT.	Sq. Yds.

B-2

2	OHIO	63	124
---	------	----	-----

CUYAHOGA COUNTY  
 CUY-42R-18.81  
 CUY-322-(1.08-1.39)



END AREA	Cu. Yds.	
	CUT	FILL
4450	0	8197
4393	0	8176
4437	0	8292
4518	0	8384
4536	0	

INNER BELT STA. 36+00 TO STA. 37+50

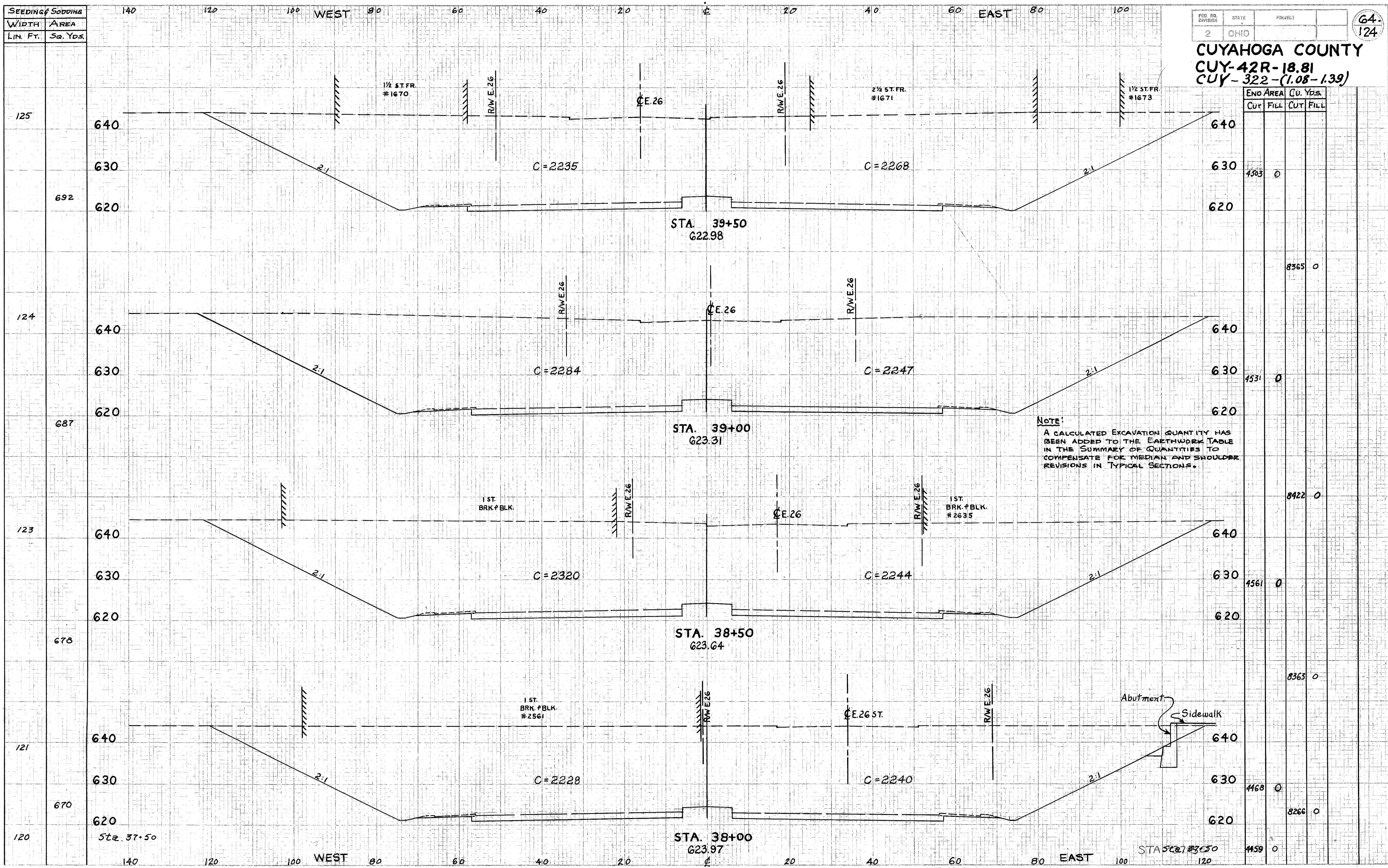


SEEDING & SODDING	
WIDTH	AREA
LIN. FT.	Sq. Yds.

FED. DIVISION	STATE	PROJECT
2	OHIO	

CUYAHOGA COUNTY  
 CUY-42R-18.81  
 CUY-322-(1.08-1.39)

64  
124



END AREA	Cu. Yds.	
	Cut	Fill
640		
630	4503	0
620		8365
640		
630	4531	0
620		8422
640		
630	4561	0
620		8363
640		
630	4468	0
620		8266
640		
630	4459	0
620		

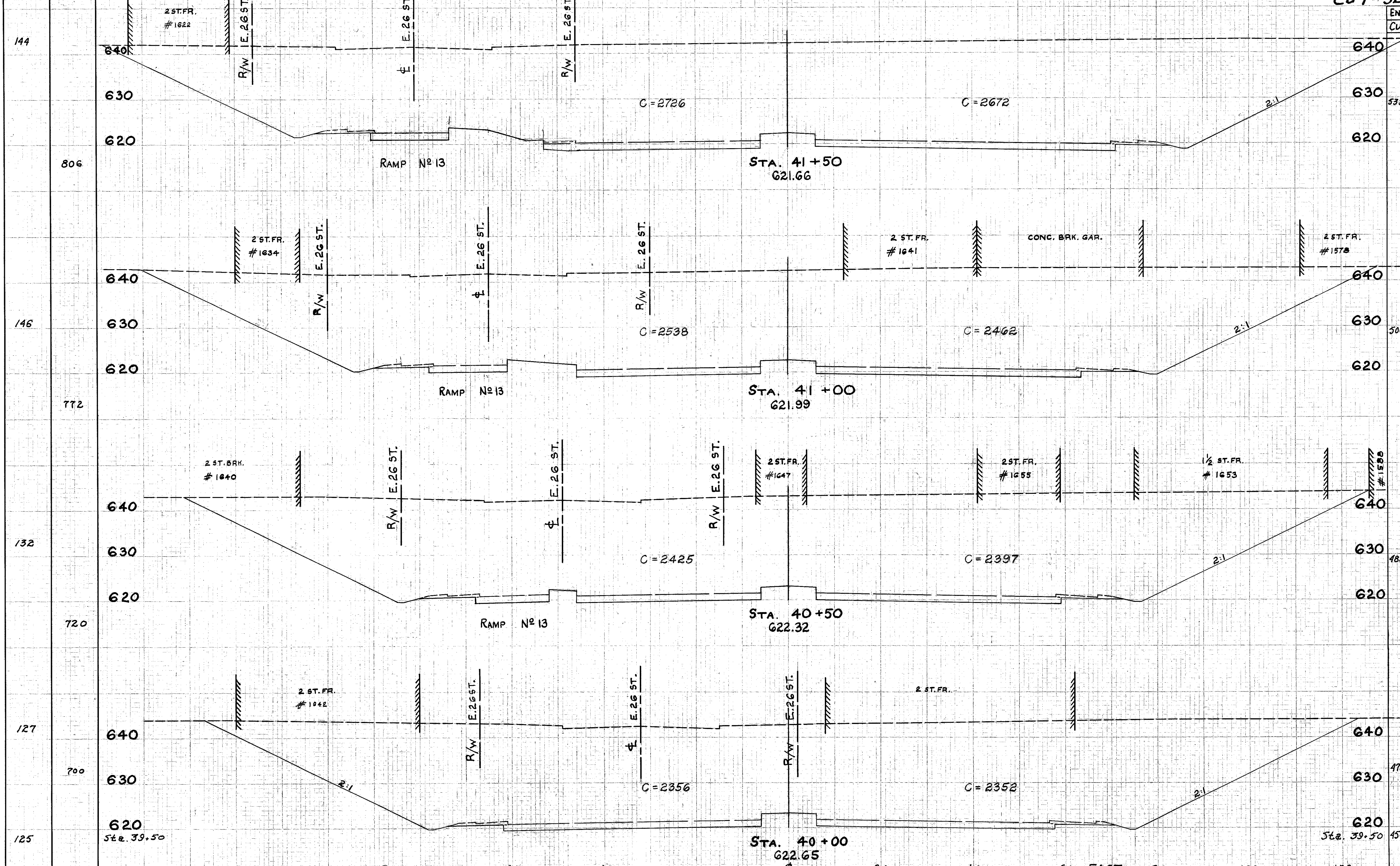
INNER BELT STA. 38+00 TO STA. 39+50

SEEDING	SODDING
WIDTH	AREA
LIN. FT.	Sq. Yds.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

65  
124

**CUYAHOGA COUNTY**  
**CUY-42R-18.81**  
**CUY-322-(1.08-1.39)**



END AREA	Cu. Yds.
CUT	FILL
CUT	FILL

144	640	640	5398	0
146	640	640	5000	0
132	640	640	4822	0
127	640	640	4708	0
125	620	620	4503	0
			9628	0
			9095	0
			8824	0
			8529	0

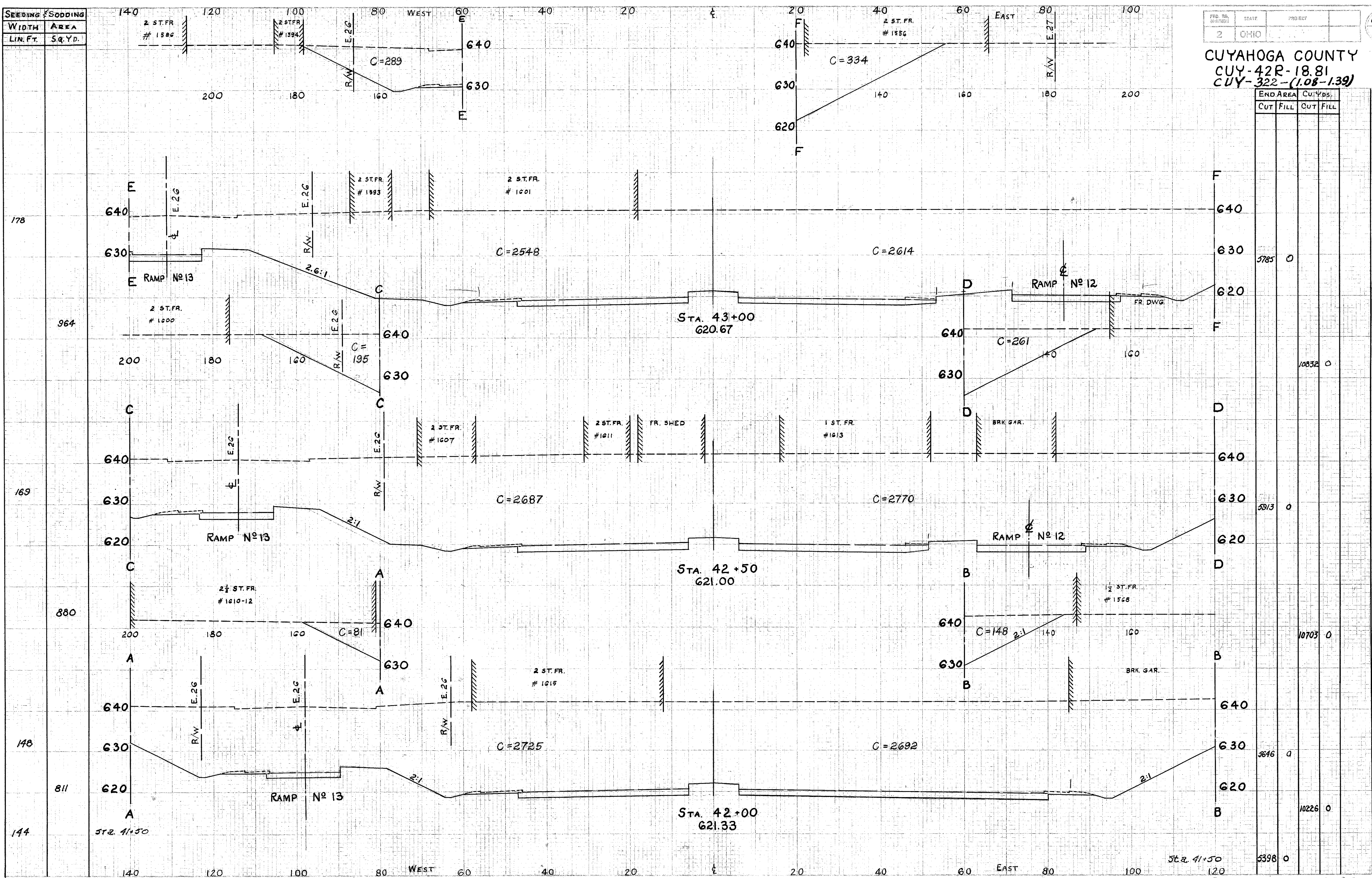
INNER BELT STA. 40+00 TO STA. 41+50

SEEDING	SODDING
WIDTH	AREA
LIN. FT.	SQ. YD.

FED. RD. DISTRICT	STATE	PROJECT
2	OHIO	

66  
124

CUYAHOGA COUNTY  
CUY-42R-18.81  
CUY-322-(1.08-1.39)

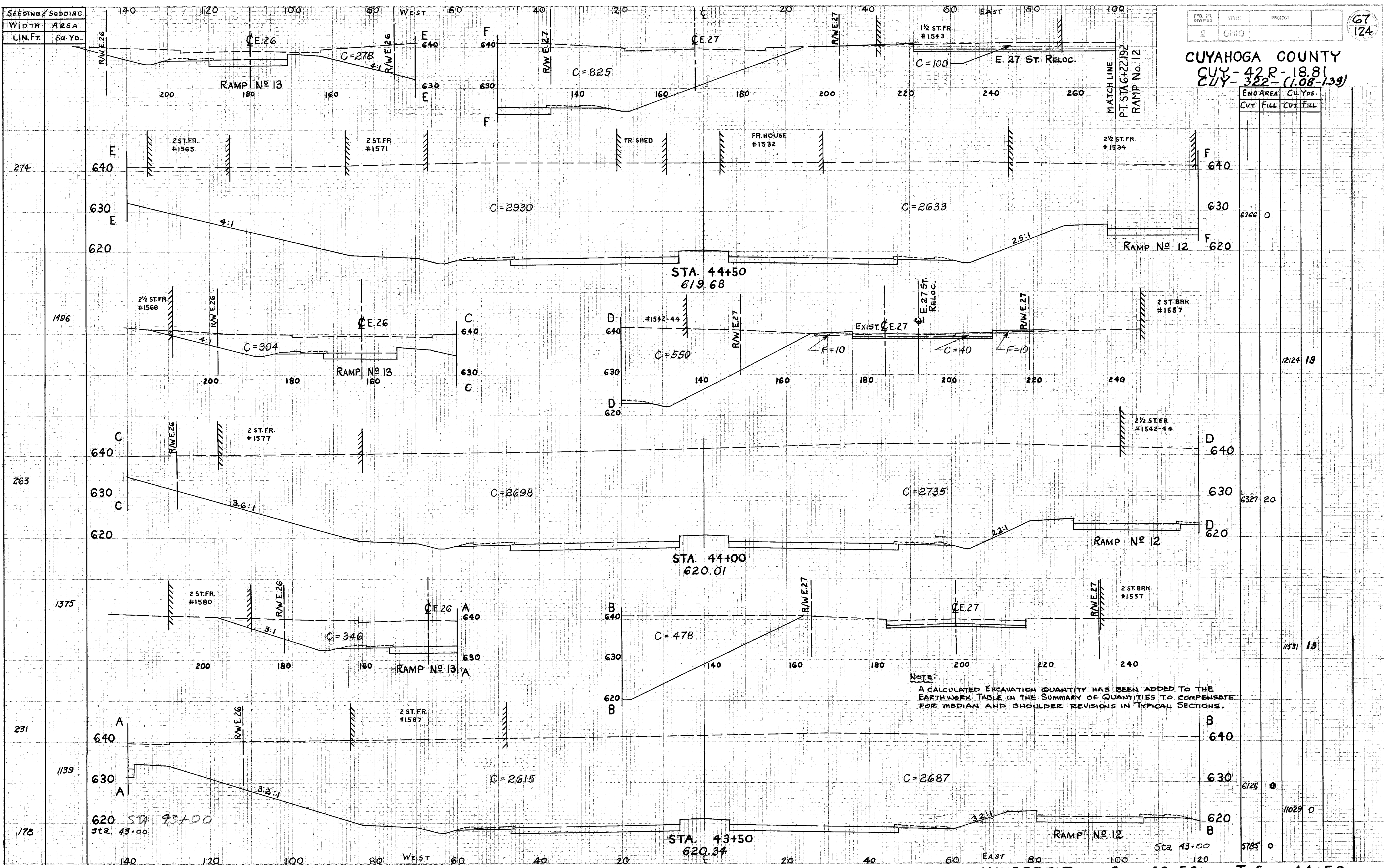


END AREA	CUT/FILL	
	CUT	FILL
3785	0	
10832	0	
5913	0	
10703	0	
3646	0	
10226	0	
5398	0	

INNERBELT STA. 42+00 To STA. 43+00

SEEDING/SODDING	WIDTH	AREA
	LN. FT.	SQ. YD.

CUYAHOGA COUNTY  
 CUY-42R-18.81  
 CUY-322-(1.08-1.39)



ENO AREA	Cu. Yds.
CUT	FILL

274	640	630	620	6766	0
196	640	630	620	12124	19
263	640	630	620	6327	20
1375	640	630	620	11531	19
231	640	630	620	6126	0
1139	640	630	620	11029	0
178	640	630	620	5785	0

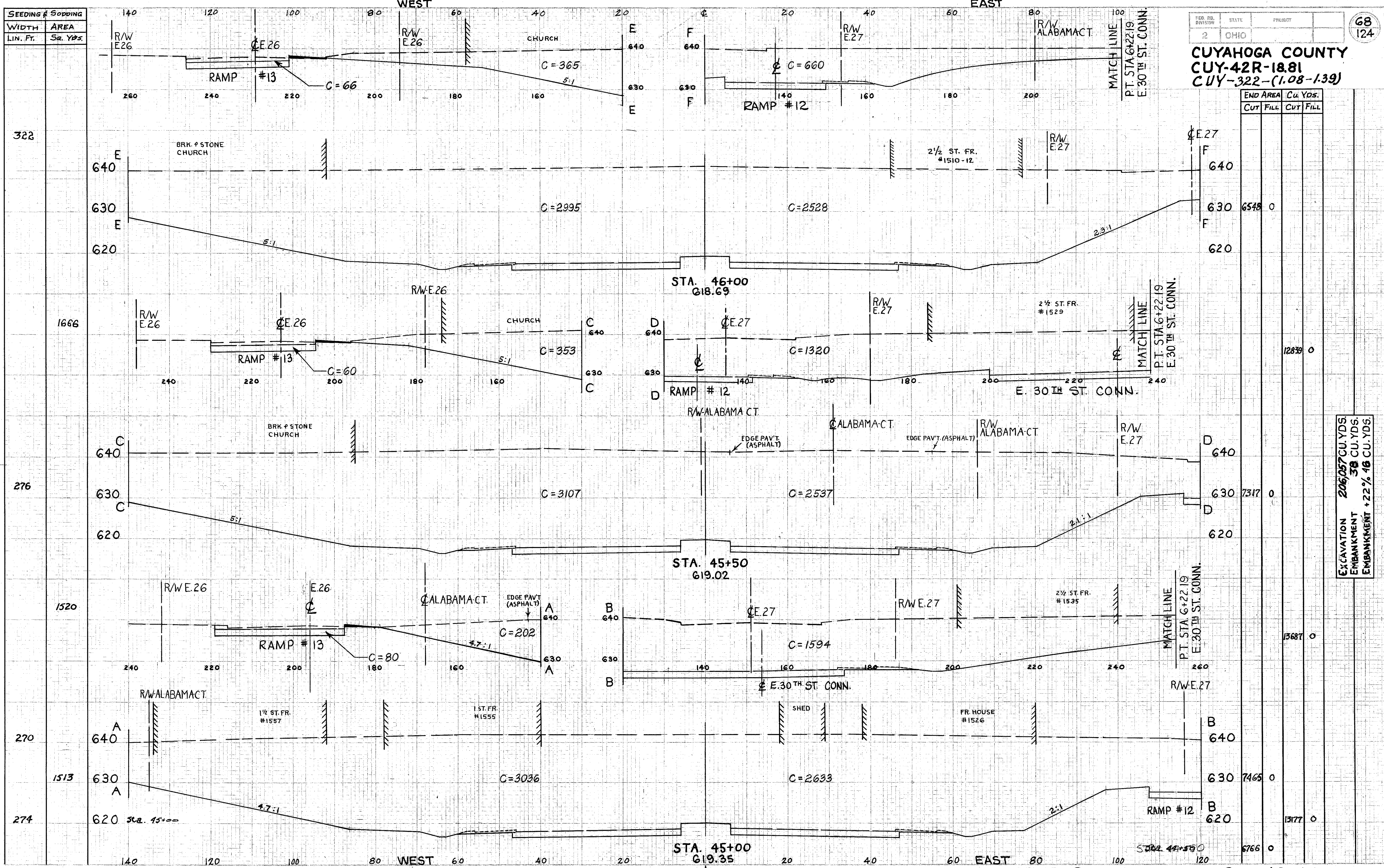
NOTE:  
 A CALCULATED EXCAVATION QUANTITY HAS BEEN ADDED TO THE EARTHWORK TABLE IN THE SUMMARY OF QUANTITIES TO COMPENSATE FOR MEDIAN AND SHOULDER REVISIONS IN TYPICAL SECTIONS.

SEEDING & Sodding	WIDTH	AREA
	LIN. FT.	Sq. Yds.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

68  
124

**CUYAHOGA COUNTY**  
**CUY-42R-18.81**  
**CUY-322-(1.08-1.39)**



END AREA	Cu. Yds.	
	CUT	FILL
6548	0	
12839	0	
7317	0	
13687	0	
7465	0	
13177	0	
6766	0	

EXCAVATION 206,057 CU. YDS.  
EMBANKMENT 38 CU. YDS.  
EMBANKMENT +22% 46 CU. YDS.

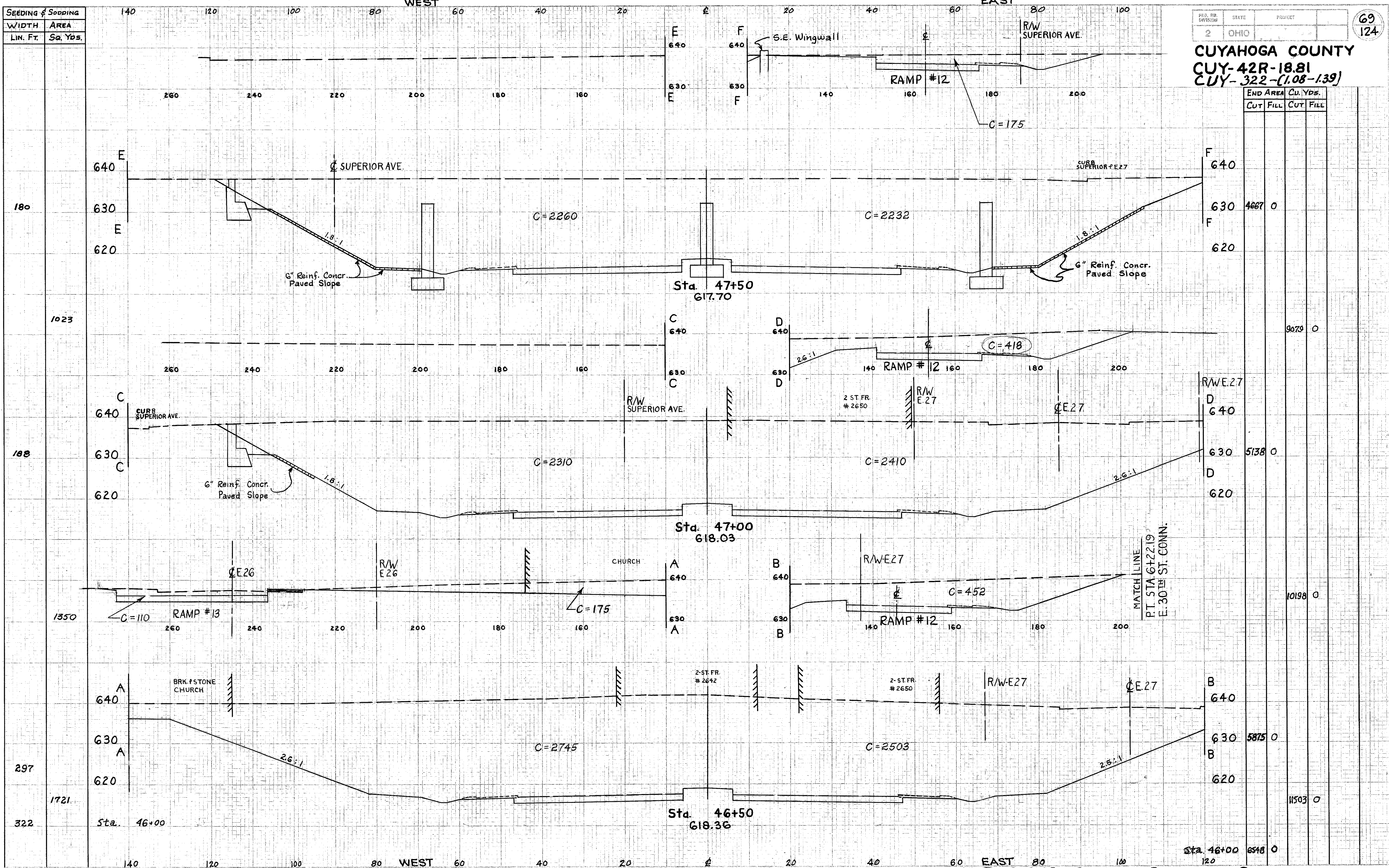
INNER BELT STA. 45+00 TO STA. 46+00

SEEDING & SODDING
WIDTH
AREA
LIN. FT.
Sq. Yds.

FED. DIV.	STATE	PROJECT
2	OHIO	

**CUYAHOGA COUNTY**  
**CUY-42R-18.81**  
**CUY-322-(1.08-1.39)**

END AREA	Cu. Yds.
CUT	FILL
	CUT
	FILL



180	4667	0
1023	9079	0
188	5138	0
1350	10198	0
297	5875	0
1721	11503	0
322	6548	0

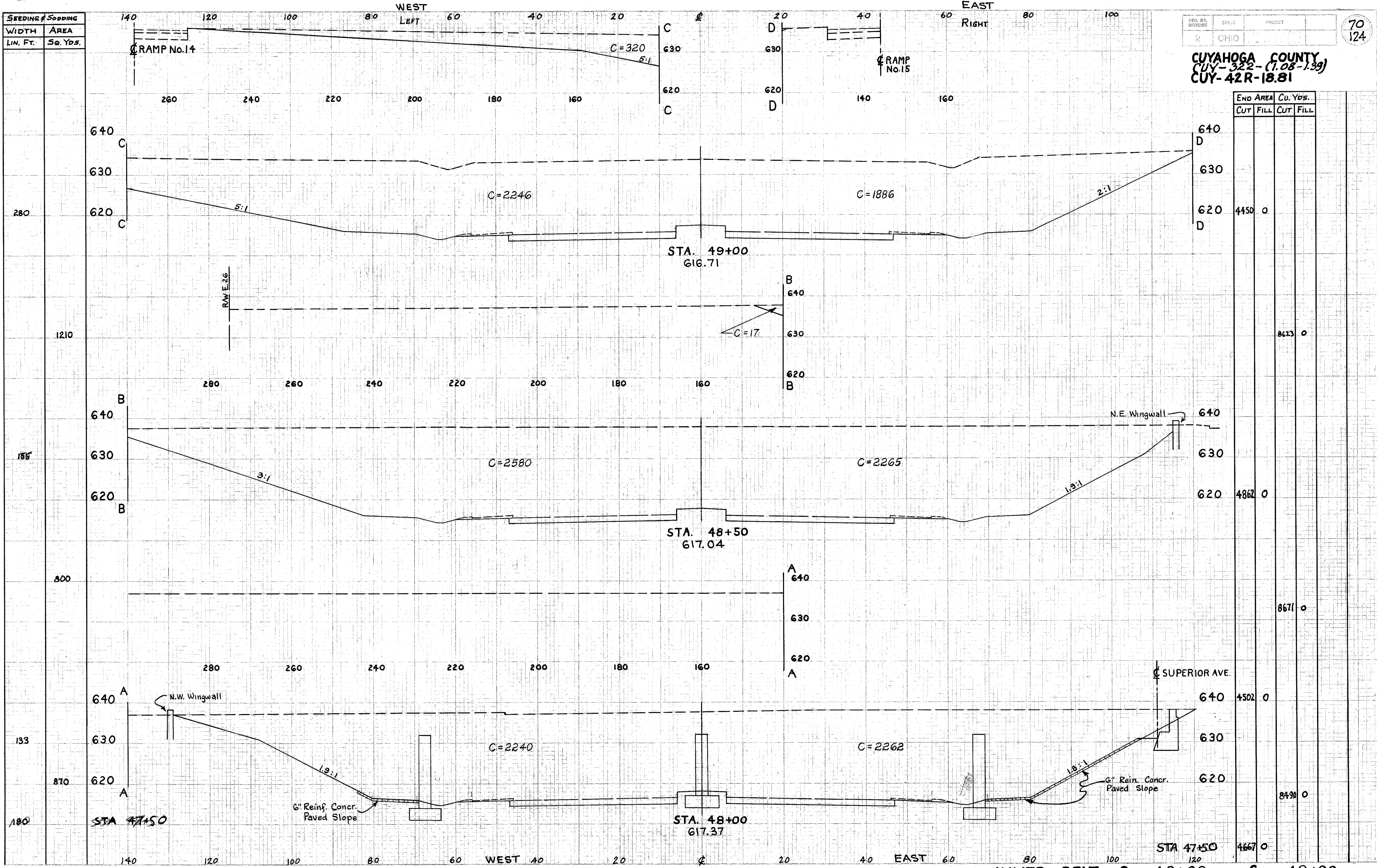
**INNER BELT STA. 46+50 TO STA. 47+50**

SEEDING & SOADING	WIDTH	AREA
	LIN. FT.	Sq. Yds.

P.L. NO.	STATE	PROJECT
2	OHIO	

70  
124

**CUYAHOGA COUNTY**  
 CUY-322-(7.08-1.39)  
 CUY-42R-18.81



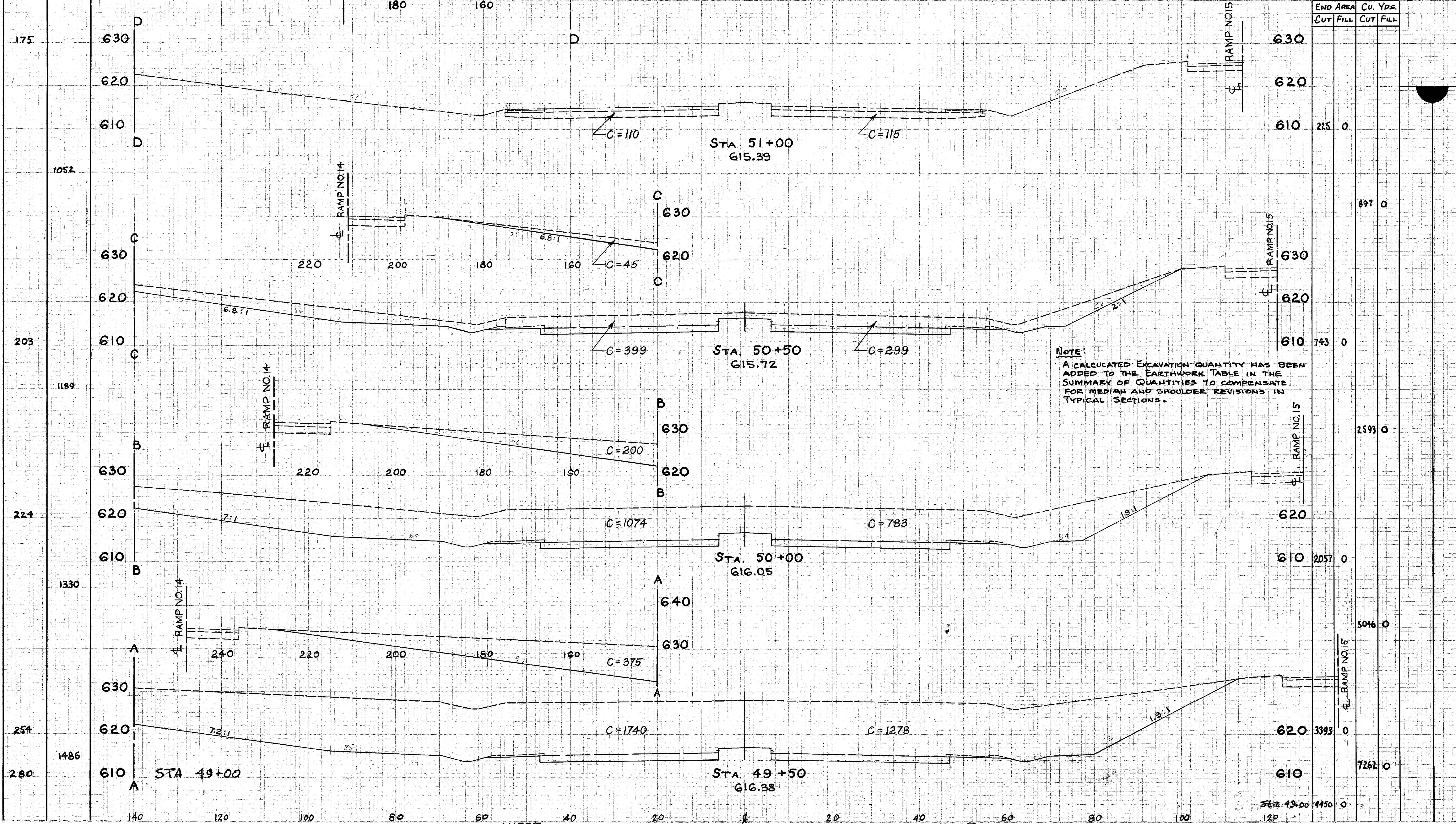
END AREA		Cu. Yds.	
CUT	FILL	CUT	FILL
4450	0		
8673	0		
4862	0		
8671	0		
4502	0		
8490	0		
4667	0		

INNER BELT Sta. 48+00 to Sta. 49+00

SEEDING & SODDING	WIDTH	AREA
	LIN. FT.	SQ. YDS.

FED. DIST. NO.	STATE	PROJECT	71
2	OHIO		124

CUYAHOGA COUNTY  
 CUY-42R-18.81  
 CUY-322-(1.08-1.39)



END AREA	Cu. Yds.	
	CUT	FILL
630		
620		
610	225	0
630		897
620		
610	743	0
630		2593
620		
610	2057	0
630		5046
620	3393	0
610		7262
610		4450

INNER BELT STA. 49+50 TO STA. 51+00

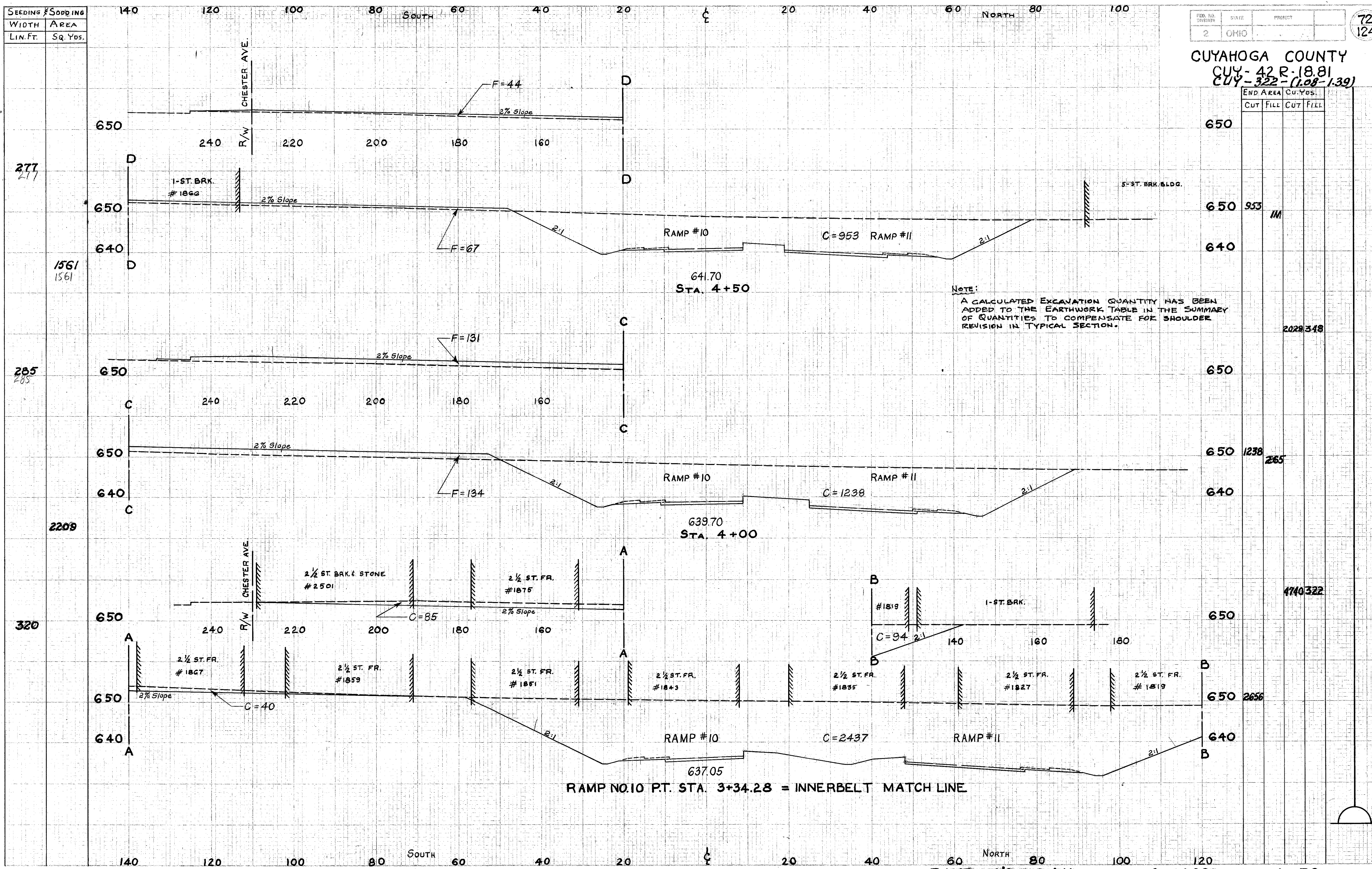


SEEDING #	SODDING
WIDTH	AREA
LIN. FT.	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

CUYAHOGA COUNTY  
 CUY-42 R-18.81  
 CUY-322-(1.08-1.39)

END AREA CU. YDS.	
CUT	FILL
953	11
1238	265
2656	4740



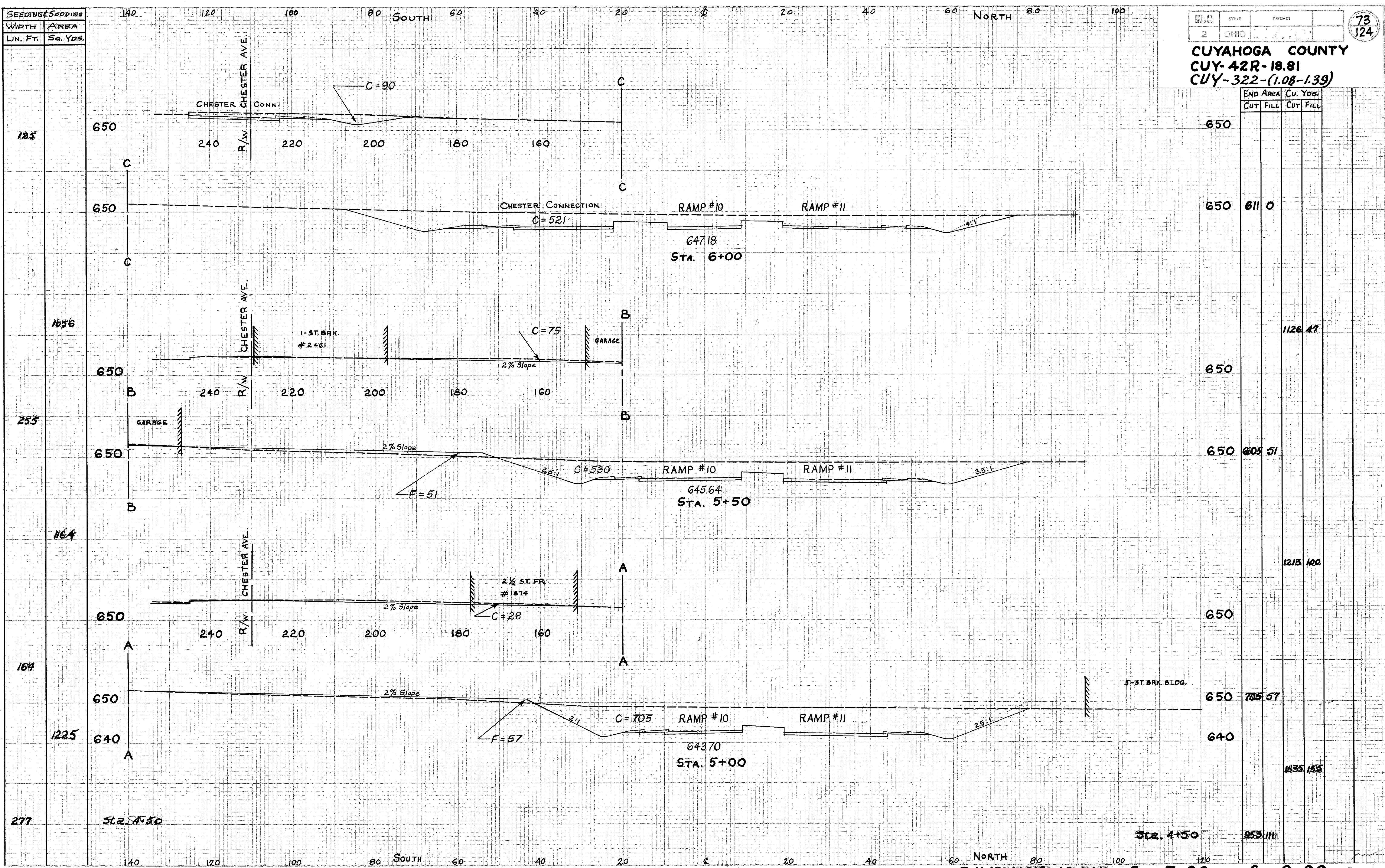
RAMP NO'S. 10 & 11 STA 3+34.28 TO STA 4+50

SEEDING	SODDING
WIDTH	AREA
LIN. FT.	Sq. YDS.

FED. DIV.	STATE	PROJECT
2	OHIO	

73  
124

**CUYAHOGA COUNTY**  
**CUY-42R-18.81**  
**CUY-322-(1.08-1.39)**



END AREA	Cu. Yds.	
	CUT	FILL
650		
650	611	0
650		
650	605	51
650		
650	1213	108
650	705	57
640		
640	1535	158
653	1111	

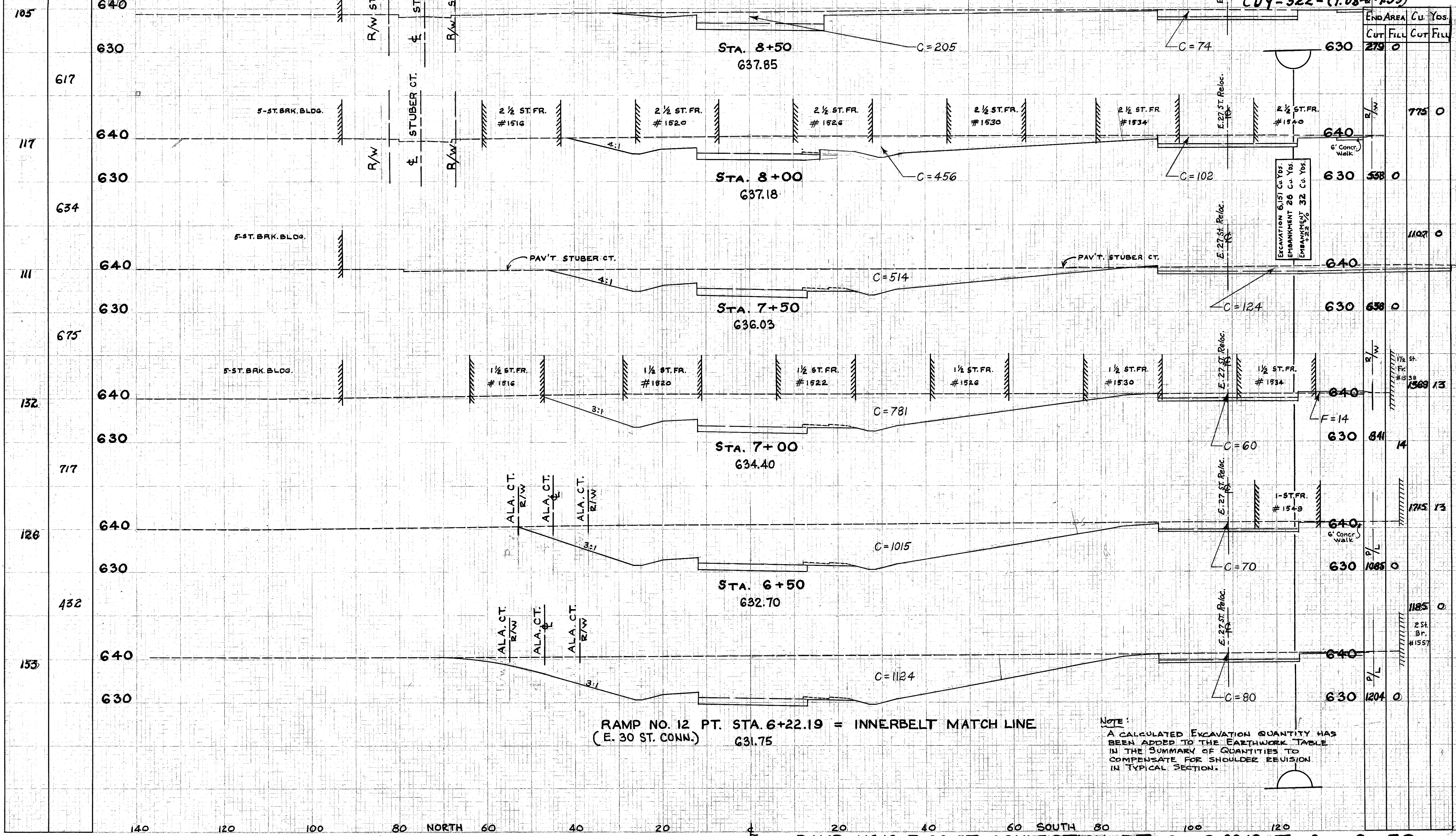
RAMP NO'S 10 & 11 STA 5+00 TO STA 6+00



SEEDING	SODDING
WIDTH	AREA
LIN. FT.	Sq. Yds.

FED. RD. DIVISION	STATE	PROJECT	75 124
2	OHIO		

CUYAHOGA COUNTY  
 CUY-42 R-18.81  
 CUY-322-(1.08-1.139)



RAMP NO. 12 P.T. STA. 6+22.19 = INNERBELT MATCH LINE  
 (E. 30 ST. CONN.) 631.75

NOTE:  
 A CALCULATED EXCAVATION QUANTITY HAS BEEN ADDED TO THE EARTHWORK TABLE IN THE SUMMARY OF QUANTITIES TO COMPENSATE FOR SHOULDER REVISION IN TYPICAL SECTION.

RAMP NO. 12, E. 30 ST. CONNECTION P.T. STA 6+22.19 TO STA 8+50

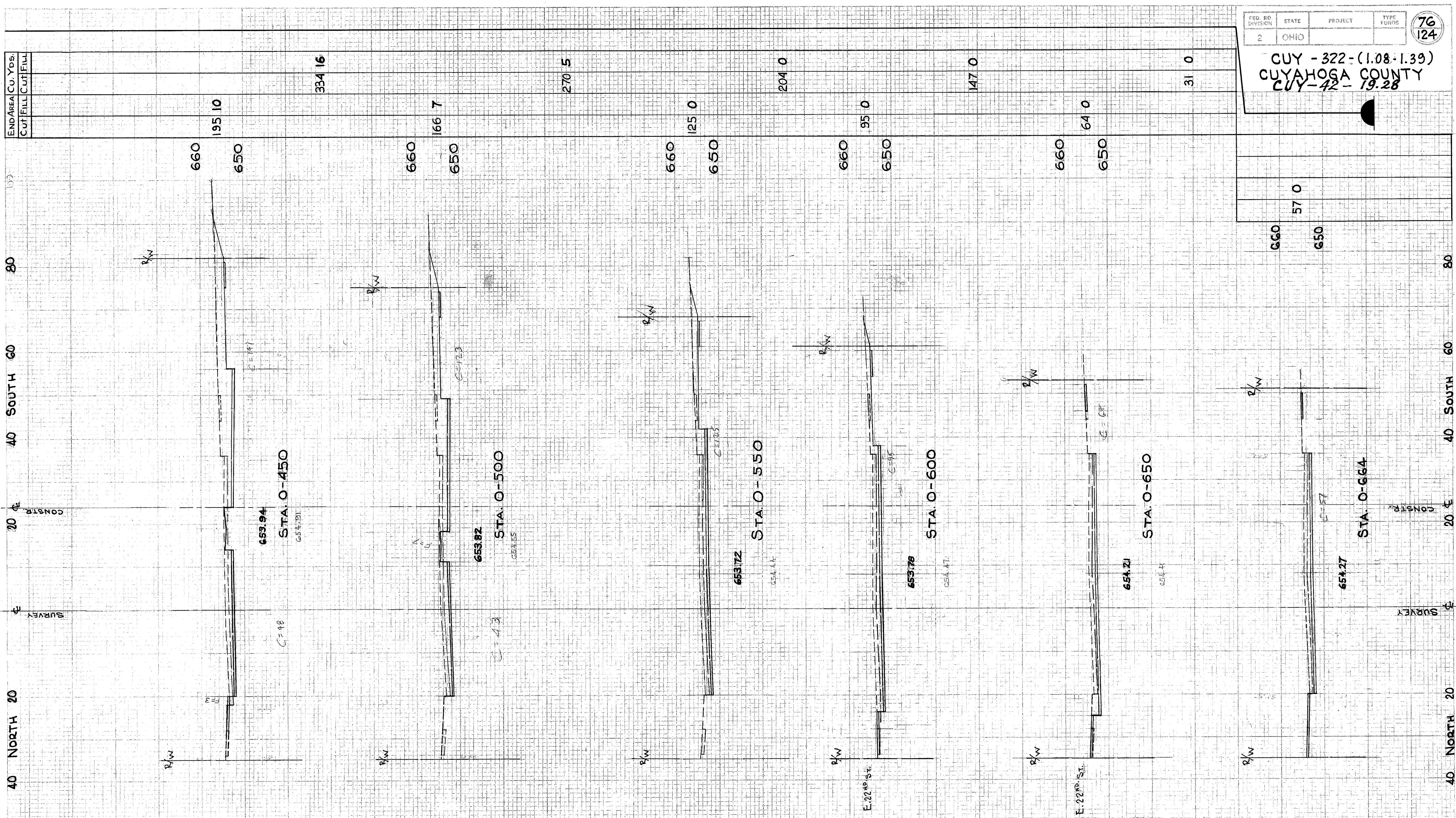
SEEDING SODDING
WIDTH AREA
LINE FT. Sq. Yds.

END AREA	Cu. Yds.
Cut	Fill
Cut	Fill

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

76  
124

CUY - 322 - (1.08-1.39)  
CUYAHOGA COUNTY  
CUY - 42 - 19.28



46

42

29

29

17

15

245

197

161

128

25

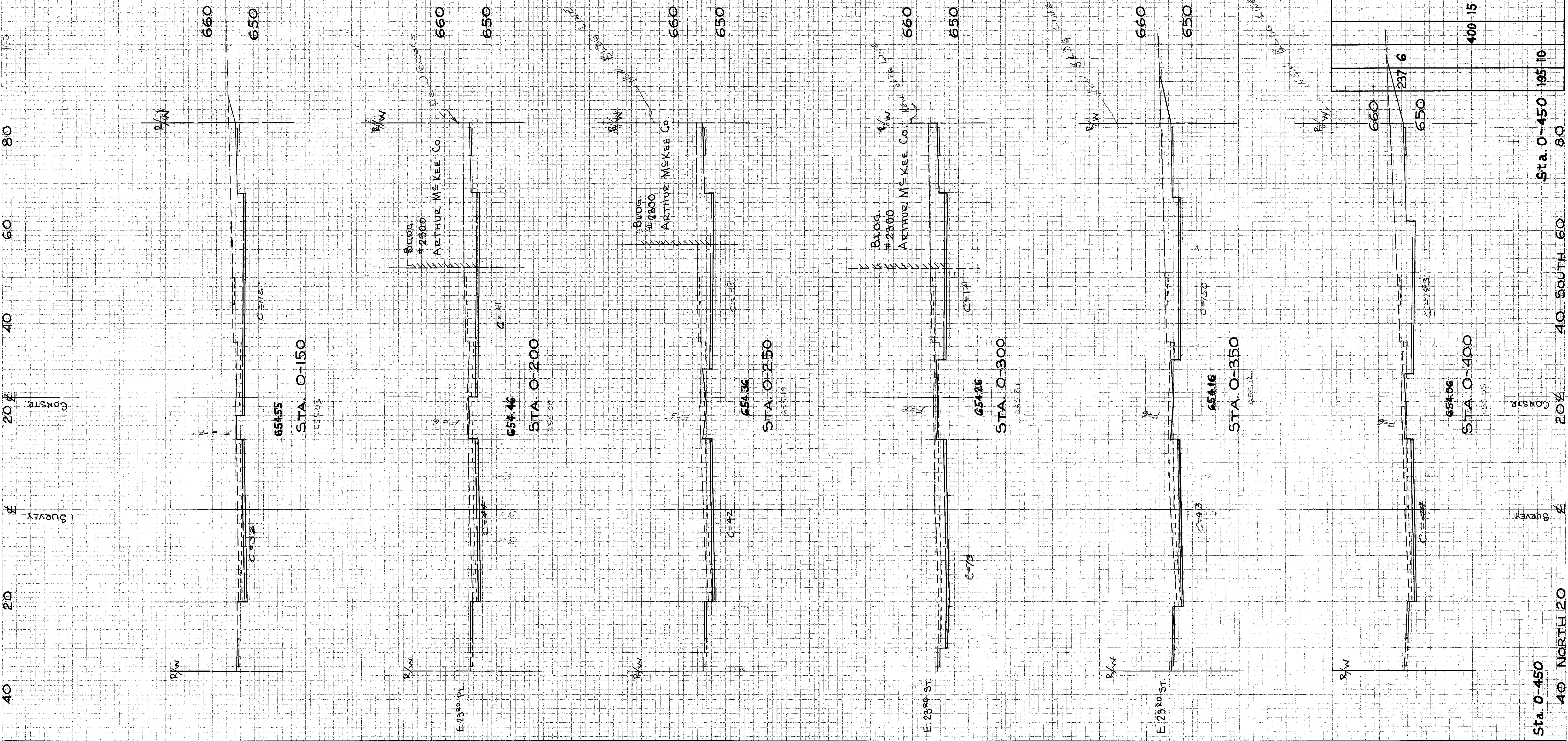
40 NORTH 20      0      20      40 SOUTH 60      80

40 NORTH 20      0      20      40 SOUTH 60      80

CHESTER AVE. X-SECTIONS STA. 0-664 TO STA. 0-450

SEEDING & SODDING  
WIDTH AREA  
LIN. FT. SQ. YDS.

END AREA  
CUT FILL  
CU. YDS.



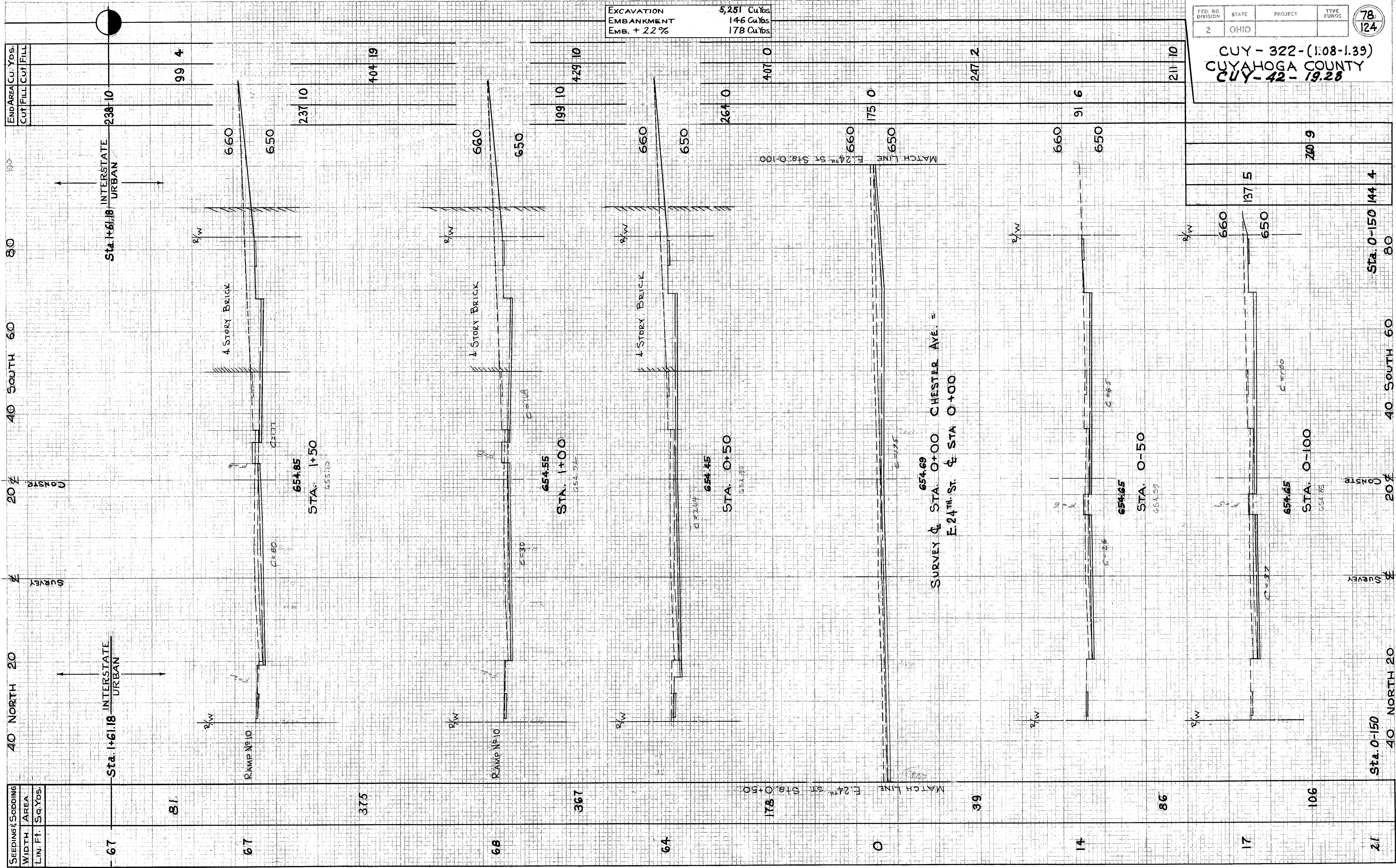
FED. RD. DISTRICT	STATE	PROJECT	TYPE FUNDS
2	OHIO	CUY-322-(1:08-1.39)	77 124
CUYAHOGA COUNTY CUY-42-19.28			

21	12.5	144	4	305	10
24	150	185	6	343	10
30	175	222	8	377	12
33	214	237	6	385	13
44	261	276	6	398	11
50	267	400	15		
46				185	10

CHESTER AVE. X-SECTIONS STA. O-400 TO STA. O-150

SEEDING & SODDING
WIDTH AREA
LN. FT. SQ. YDS.

END AREA CU. YDS.
CUT
FILL
Cut Fill



EXCAVATION 5,251 Cu.Yds  
 EMBANKMENT 146 Cu.Yds  
 EMB. + 22% 178 Cu.Yds

FED. RD. DIVISION	STATE	PROJECT	TYPE	FUNDS
2	OHIO			

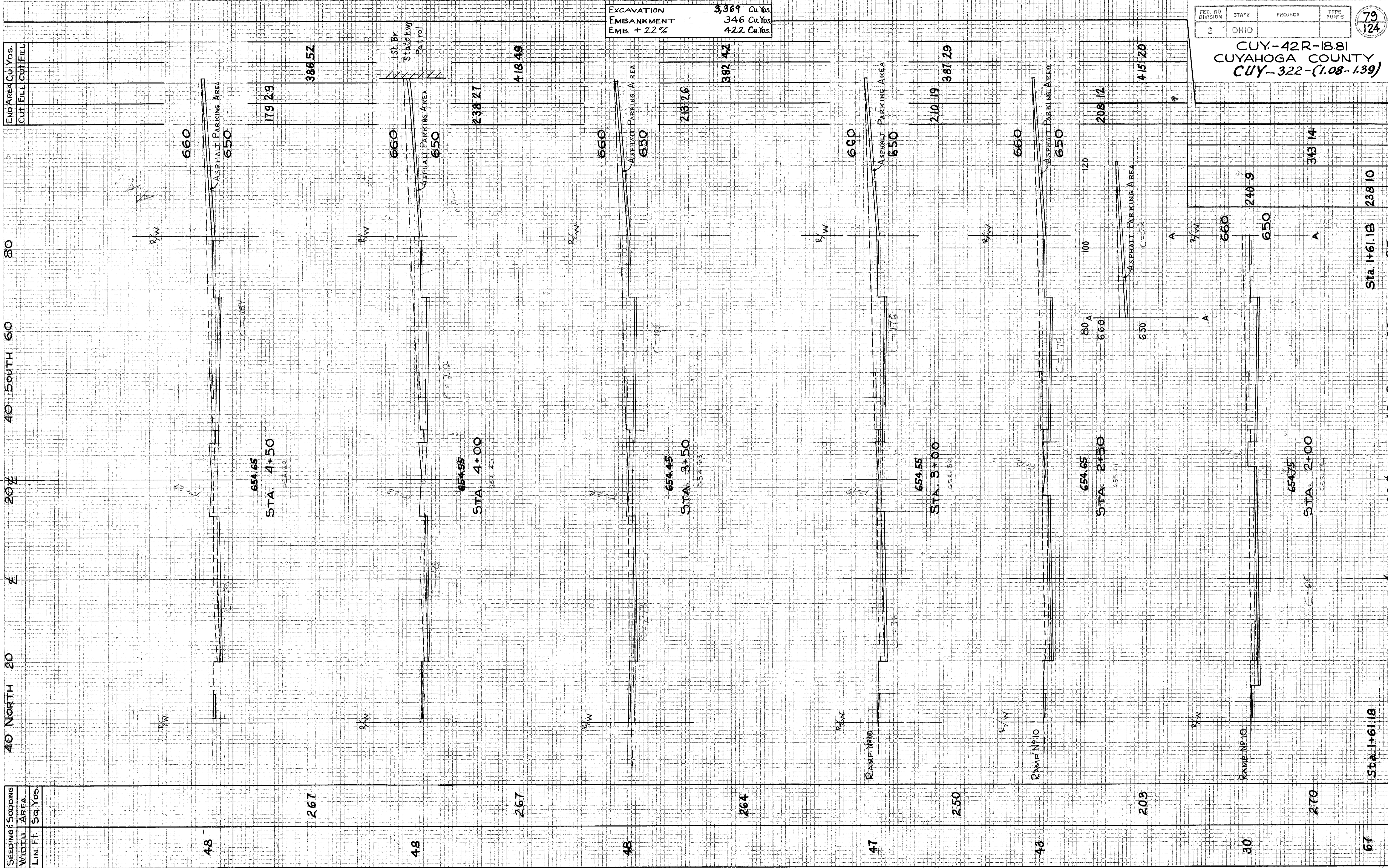
CUY - 322 - (1.08-1.39)  
 CUYAHOGA COUNTY  
 CUY - 42 - 19.28

78  
124

CHESTER AVE. X - SECTIONS STA. 0-100 TO STA. 1+50

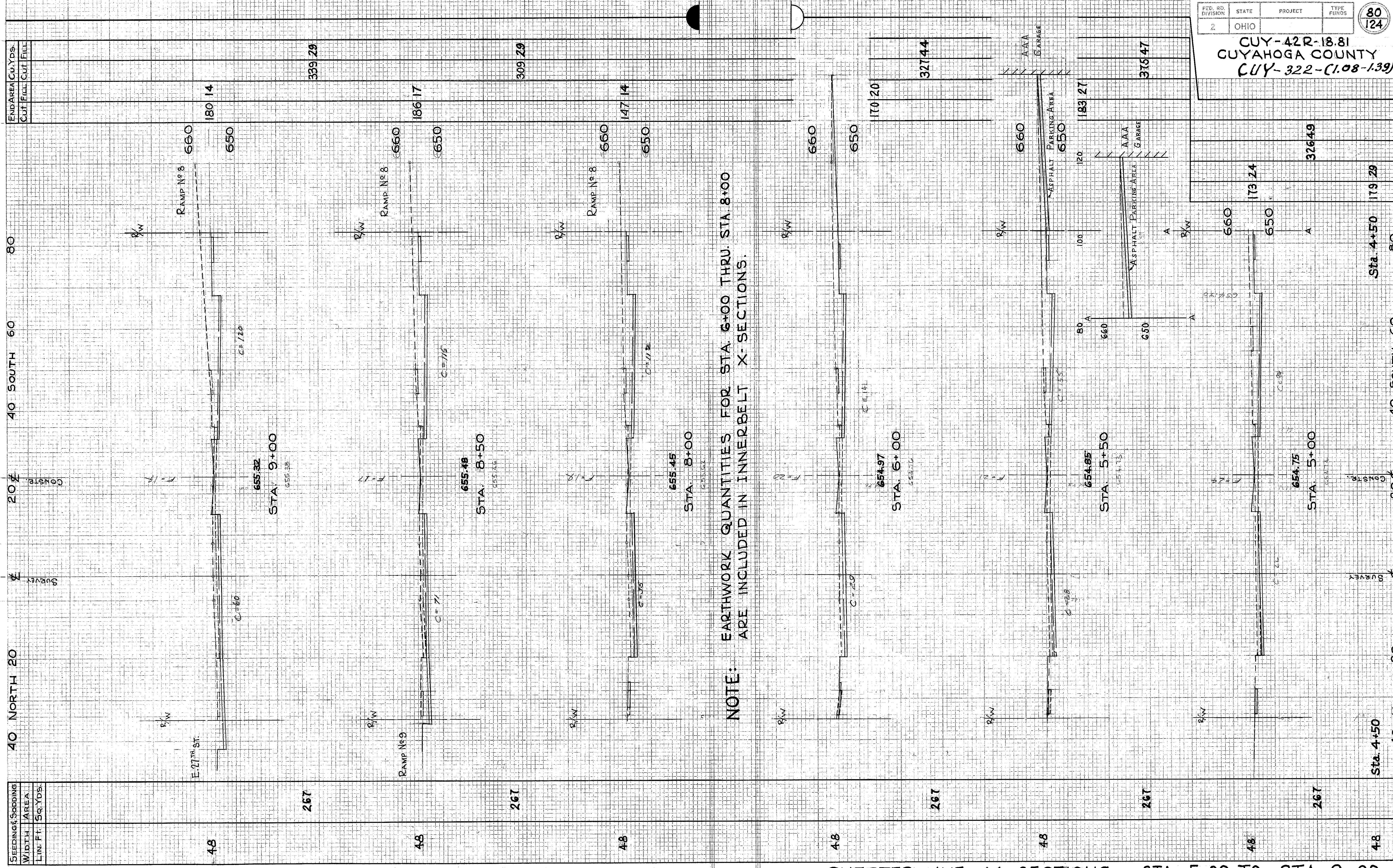
SEEDING & SODDING  
WIDTH AREA  
LIN. FT. SQ. YDS.

END AREA CU. YDS.  
CUT FILL CUT/FILL



CHESTER AVE. X-SECTIONS STA. 2+00 TO STA. 4+50





NOTE: EARTHWORK QUANTITIES FOR STA. 6+00 THRU STA. 8+00 ARE INCLUDED IN INNERBELT X-SECTIONS.

END AREA CUY. YDS.
Cut
Fill

SEEDING & SOODING
WIDTH AREA
LIN. FT. SQ. YDS.

48	267	48	267	48	267	48	267	48	267	48	267
----	-----	----	-----	----	-----	----	-----	----	-----	----	-----

40 NORTH 20      20'      40 SOUTH 60      80

E. 27<sup>TH</sup> ST.

RAMP No 8

RAMP No 9

ASPHALT PARKING AREA

AAA GARAGE

STA. 9+00

STA. 8+50

STA. 8+00

STA. 6+00

STA. 5+50

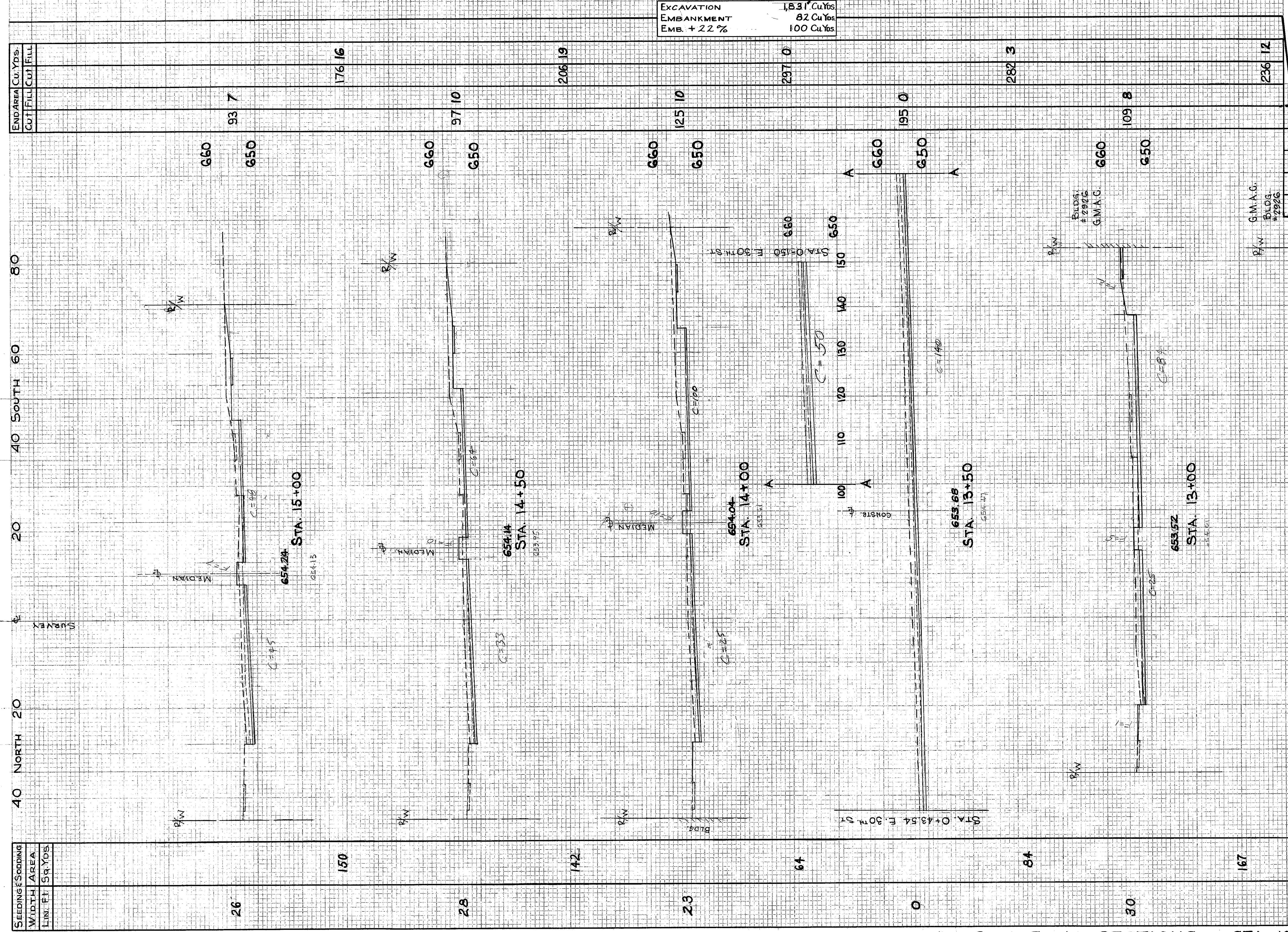
STA. 5+00

Sta. 4+50

CHESTER AVE. X-SECTIONS STA. 5+00 TO STA. 9+00



CUY - 322-(1.08-1.39)  
CUYAHOGA COUNTY  
CUY-42-19.28



END AREA	Cu. Yds.
CUT	FILL
93	7
176	16
97	10
206	19
125	10
297	0
195	0
282	3
109	8
236	12

EXCAVATION	1,831 Cu.Yds
EMBANKMENT	82 Cu.Yds
EMB. + 22 %	100 Cu.Yds

SEEDING & SODDING
WIDTH AREA
LINE FT
SQ. YDS.

26	150	28	142	23	64	0	64	30	167	30	150
----	-----	----	-----	----	----	---	----	----	-----	----	-----

CHESTER AVE. X-SECTIONS STA. 12+50 TO STA. 15+00

Sta. 12+05.44 154 10

40 SOUTH 60

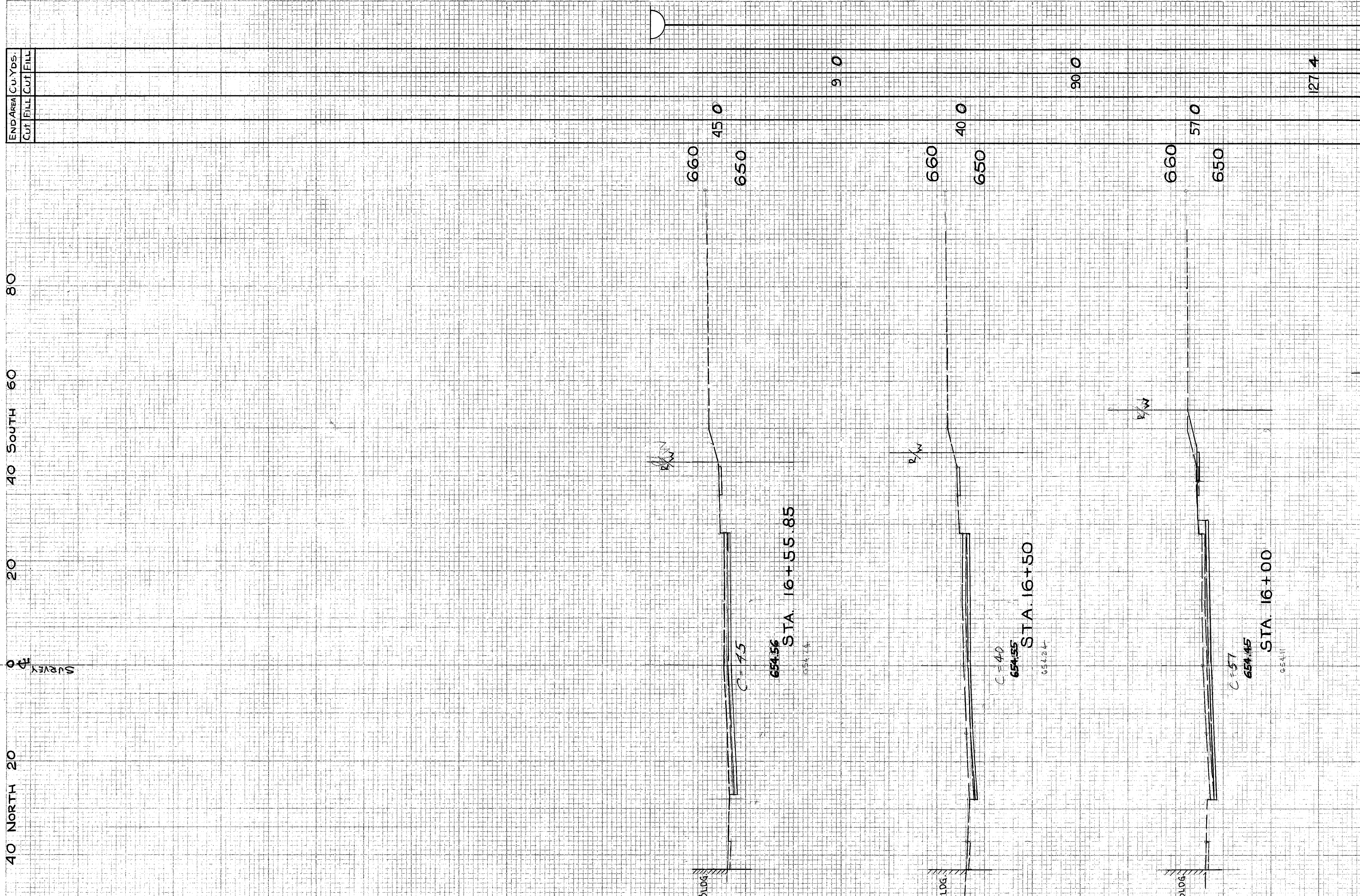
204

40 NORTH 20

Sta. 12+05.44

SEEDING	WIDTH	AREA
NO.	IN FT.	SQ. YDS.

END AREA	CUT	FILL	CUT	FILL
CU. YDS.				



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

CUY - 322-(1.08-1.39)  
 CUYAHOGA COUNTY  
 CUY-42-19.28

660	80	10	160	16
650	93	7		

15	13	128	131	139	26
----	----	-----	-----	-----	----

CHESTER AVE. X-SECTIONS STA. 15+50 TO STA. 16+55.85

SEEDING & SODDING
WIDTH AREA
LIN. FT. SQ. YDS.

46

256

46

241

41

10

56

10

28

0

40 WEST 20

±

20 EAST 40

60

R/W

1 Story Brick

C=67

STA. 1+50

MATCH LINE = STA. 7+00 RAMP No. 10

R/W

1 Story Brick

C=54

STA. 1+00

MATCH LINE = STA. 2+00 RAMP No. 10

R/W

1 Story Brick

C=50

STA. 0+50

MATCH LINE = STA. 7+00 RAMP No. 10

R/W

C=68

STA. 0-100

R/W

C=31

STA. 0-150

R/W

C=50

STA. 0-175

±

40 WEST 20

20 EAST 40

60

EXCAVATION  
EMBANKMENT  
EMB. + 2.2 %

1,186 Cu. Yds.  
3 Cu. Yds.  
4 Cu. Yds.

EXCAVATION  
EMBANKMENT  
EMB. + 2.2 %

105 Cu. Yds.  
0 Cu. Yds.  
0 Cu. Yds.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

84  
124

CUY-42R-18.81  
CUY-322-(1.08-1.39)  
CUYAHOGA COUNTY

NOTE: EARTHWORK QUANTITIES FOR STA. 0-100 THRU. STA. 0+50 ARE INCLUDED IN CHESTER AVE. X-SECTIONS.

E. 24<sup>TH</sup> ST. X-SECTIONS STA. 0-175 To STA. 1+50



H1.0

Q-18

CUY-90-17.25

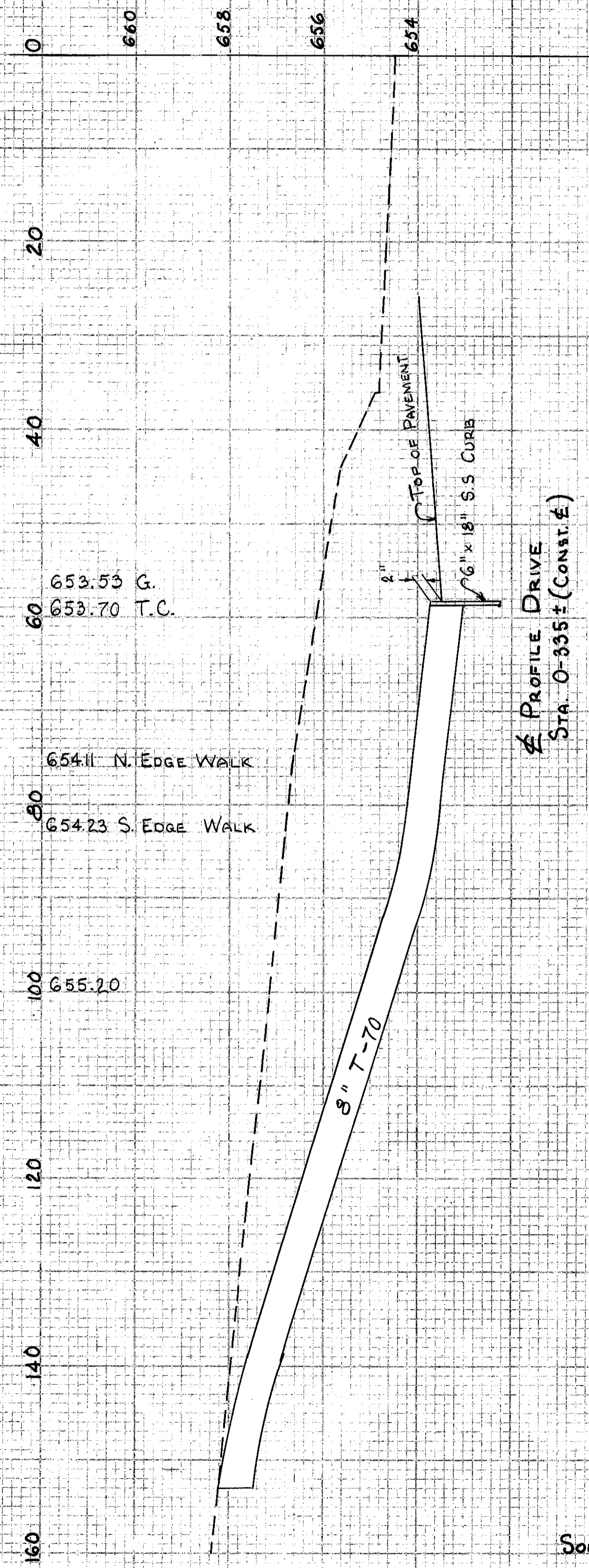
# DRIVEWAY DETAILS CHESTER AVE.

SCALE HOR. 1" = 10'  
VERT. 1" = 2'

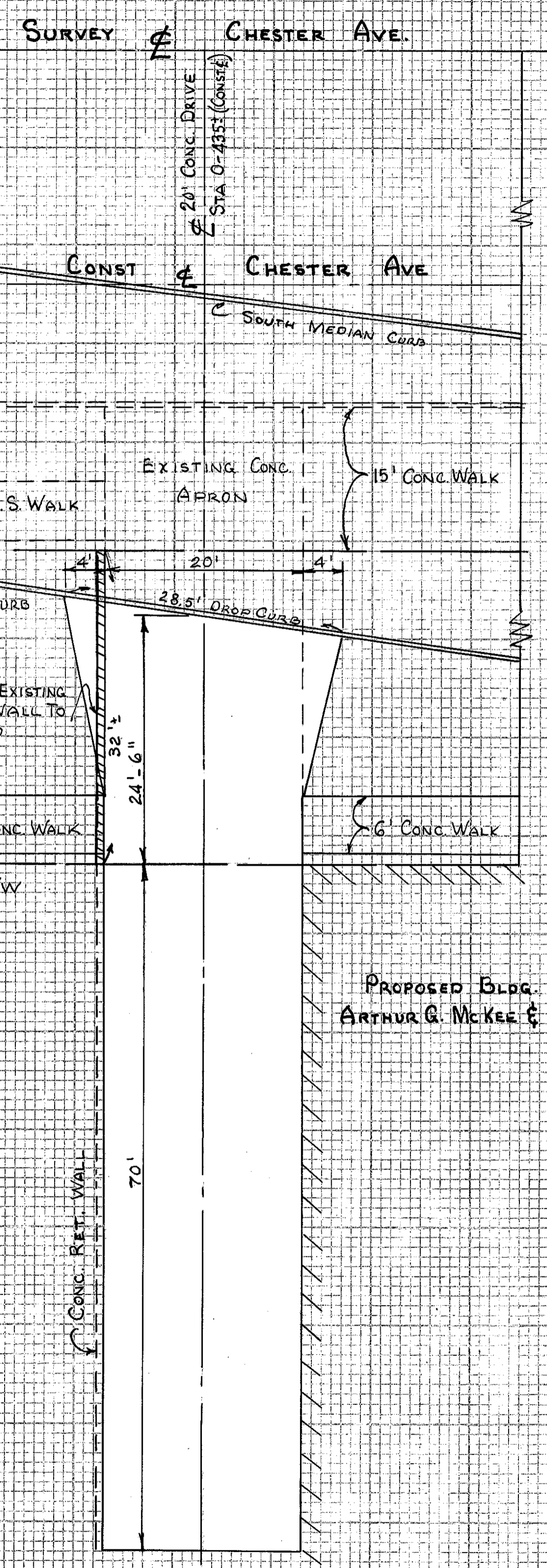
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

86  
124

CUYAHOGA COUNTY  
CUY-322-(1.08-1.39)  
CUY-42-19.28



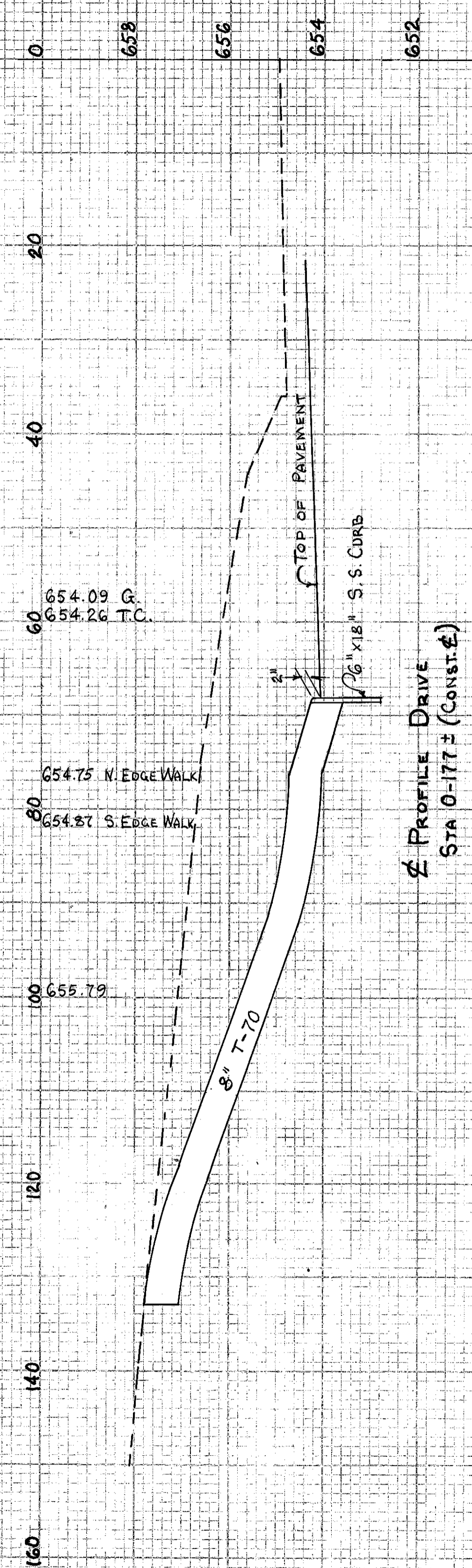
PROFILE DRIVE  
STA 0-335 ± (CONST. ±)



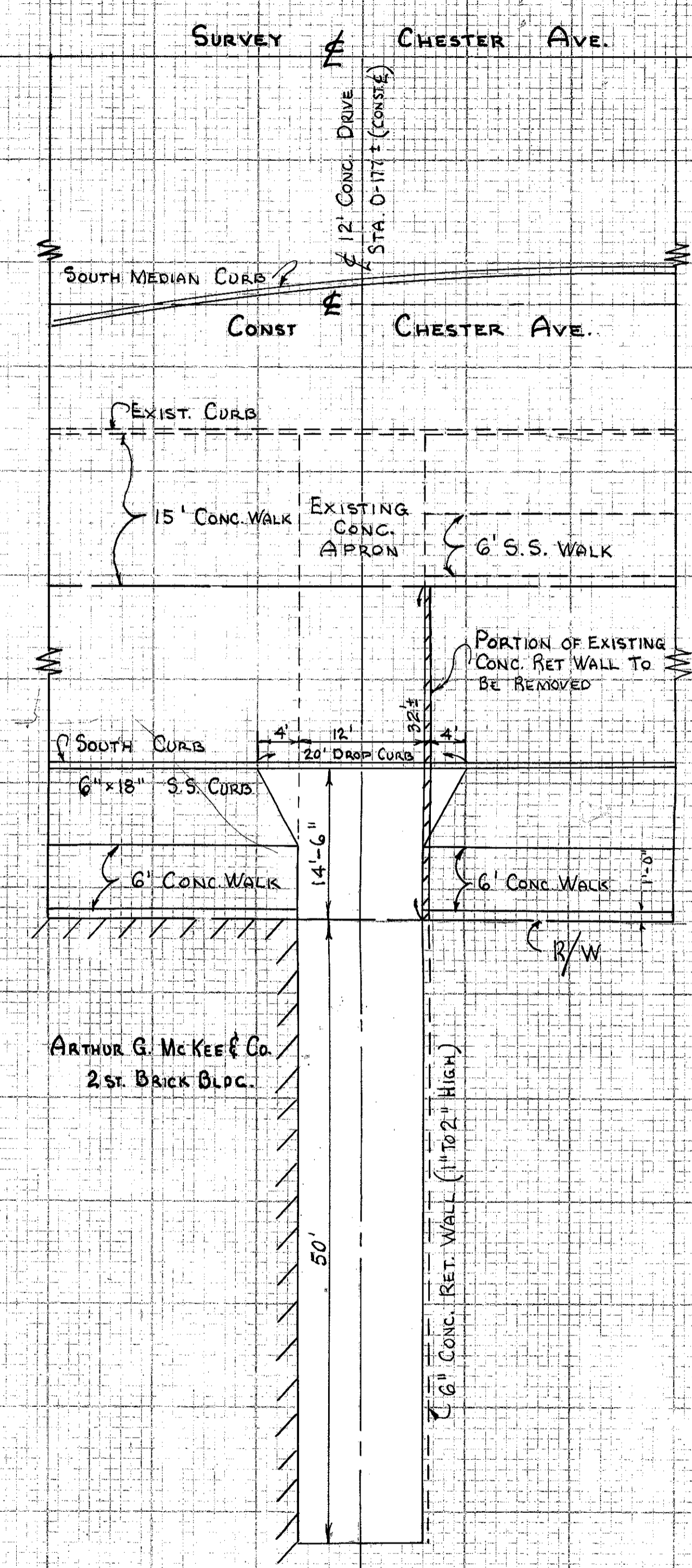
PROPOSED BLDG.  
ARTHUR G. MCKEE & Co.

SOUTH SIDE CHESTER AVE. STA. 0-435 ±  
ITEM (1A) PLAN SH. NO. 32

T-70	8" PORTLAND CEMENT CONCRETE	217.6	Sq. Yds.
E-8	REMOVAL & DISPOSAL EXIST. CONC. DRIVE	258.9	Sq. Yds.
E-101	EXCAVATION	85	Cu. Yds.
S-22	REMOVAL OF PORTION OF EXIST. STRUCTURE		LUMP SUM



PROFILE DRIVE  
STA 0-177 ± (CONST. ±)



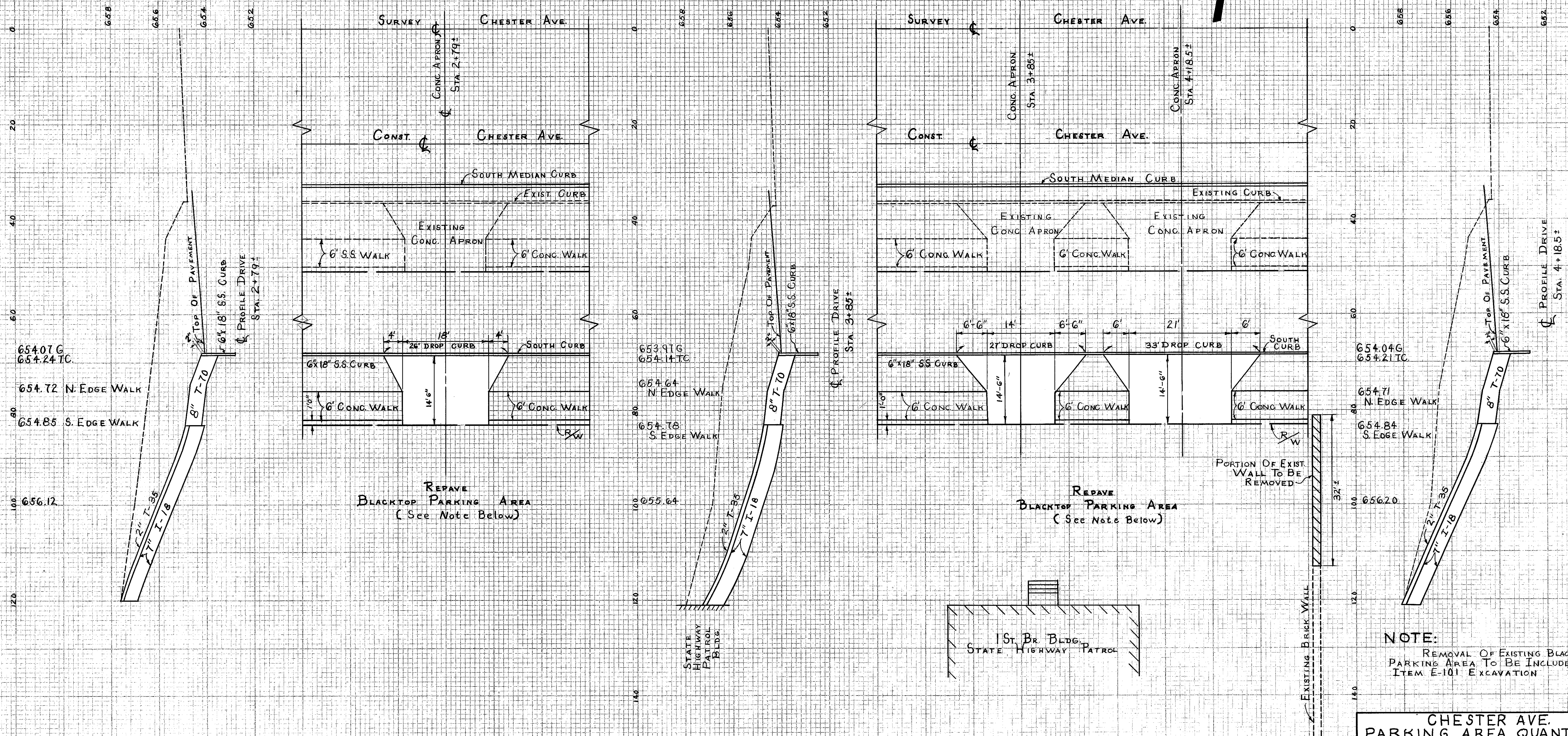
ARTHUR G. MCKEE & Co.  
2 ST. BRICK BLDG.

SOUTH SIDE CHESTER AVE. STA. 0-177 ±  
ITEM (2A) PLAN SH. NO. 32

T-70	8" PORTLAND CEMENT CONCRETE	70	Sq. Yds.
E-8	REMOVAL & DISPOSAL EXIST. CONC. APRON & DRIVE	129.3	Sq. Yds.
E-101	EXCAVATION	59	Cu. Yds.
S-22	REMOVAL OF PORTION OF EXIST. STRUCTURE		LUMP SUM

# DRIVEWAY DETAILS CHESTER AVE.

SCALE HOR. 1"=10'  
VERT. 1"=2'



REPAVE  
BLACKTOP PARKING AREA  
(See Note Below)

REPAVE  
BLACKTOP PARKING AREA  
(See Note Below)

NOTE:  
REMOVAL OF EXISTING BLACKTOP  
PARKING AREA TO BE INCLUDED IN  
ITEM E-101 EXCAVATION

**SOUTH SIDE CHESTER AVE. STA. 2+79±**  
**ITEM (1-A) PLAN SHEET No. 30**

T-70 8" PORTLAND CEMENT CONCRETE 32.3 SQ. YDS.  
E-101 EXCAVATION 9 CU. YDS.

**SOUTH SIDE CHESTER AVE. STA. 3+85±**  
**ITEM (2-A) PLAN SHEET No. 30**

T-70 8" PORTLAND CEMENT CONCRETE 28.0 SQ. YDS.  
E-101 EXCAVATION 8 CU. YDS.

**SOUTH SIDE CHESTER AVE. STA. 4+18.5±**  
**ITEM (3-A) PLAN SHEET No. 30**

T-70 8" PORTLAND CEMENT CONCRETE 38.8 SQ. YDS.  
E-101 EXCAVATION 11 CU. YDS.  
S-22 REMOVAL OF PORTION OF EXIST. STRUCTURE LUMP SUM

**CHESTER AVE.  
PARKING AREA QUANTITIES**

LOCATION	T-35 2" ASP. SURF. COURSE SQ. YDS.	T-30 BIT PRIME COAT GAL.	I-18 1" CRUSHED AGGREGATE CU. YDS.
STA. 1+96± TO STA. 3+53±	662.9	232.0	128.9
STA. 3+53± TO STA. 4+18±	392.7	137.5	76.3
<b>TOTALS</b>	<b>1055.6</b>	<b>369.5</b>	<b>205.2</b>



# DRIVEWAY DETAILS

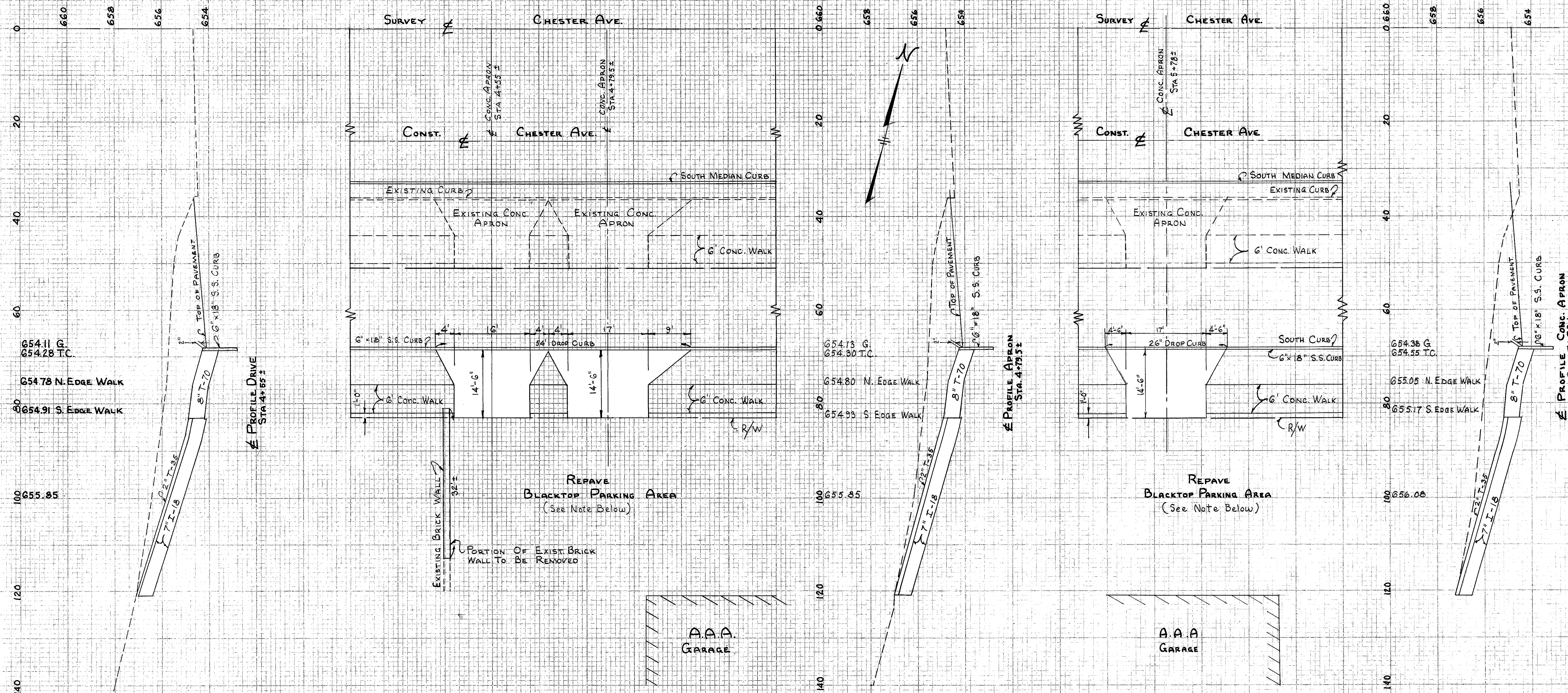
## CHESTER AVE.

SCALE: HOR. 1" = 10'  
VERT. 1" = 2'

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

88  
124

CUYAHOGA COUNTY  
CUY - 42R-18.81  
CUY - 322 - (1.08-1.39)



SOUTH SIDE CHESTER AVE. STA. 4+55±  
ITEM (4A) PLAN SH. NO. 30  
T-70 8" PORTLAND CEMENT CONCRETE 29.1 Sq. Yds.  
E-101 EXCAVATION 8 Cu. Yds.

SOUTH SIDE CHESTER AVE. STA. 4+79.5±  
ITEM (5A) PLAN SH. NO. 30  
T-70 8" PORTLAND CEMENT CONCRETE 32.8 Sq. Yds.  
E-101 EXCAVATION 9 Cu. Yds.

SOUTH SIDE CHESTER AVE. STA. 5+78±  
ITEM (6A) PLAN SH. NO. 30  
T-70 8" PORTLAND CEMENT CONCRETE 31.1 Sq. Yds.  
E-101 EXCAVATION 8 Cu. Yds.

NOTE: Removal of existing blacktop parking area to be included in Item E-101 Excavation

LOCATION	CHESTER AVE. PARKING AREA QUANTITIES		
	T-35 2" ASP SURF COURSE	T-30 1" BIT PRIME COAT	I-18 1" CRUSHED AGGREGATE
	Sq. Yds.	GAL.	Cu. Yds.
Sta. 4+46 to Sta. 5+97±	637.5	2,231	123.9

### DRIVEWAY DETAILS & QUANTITIES

# DRIVEWAY DETAILS

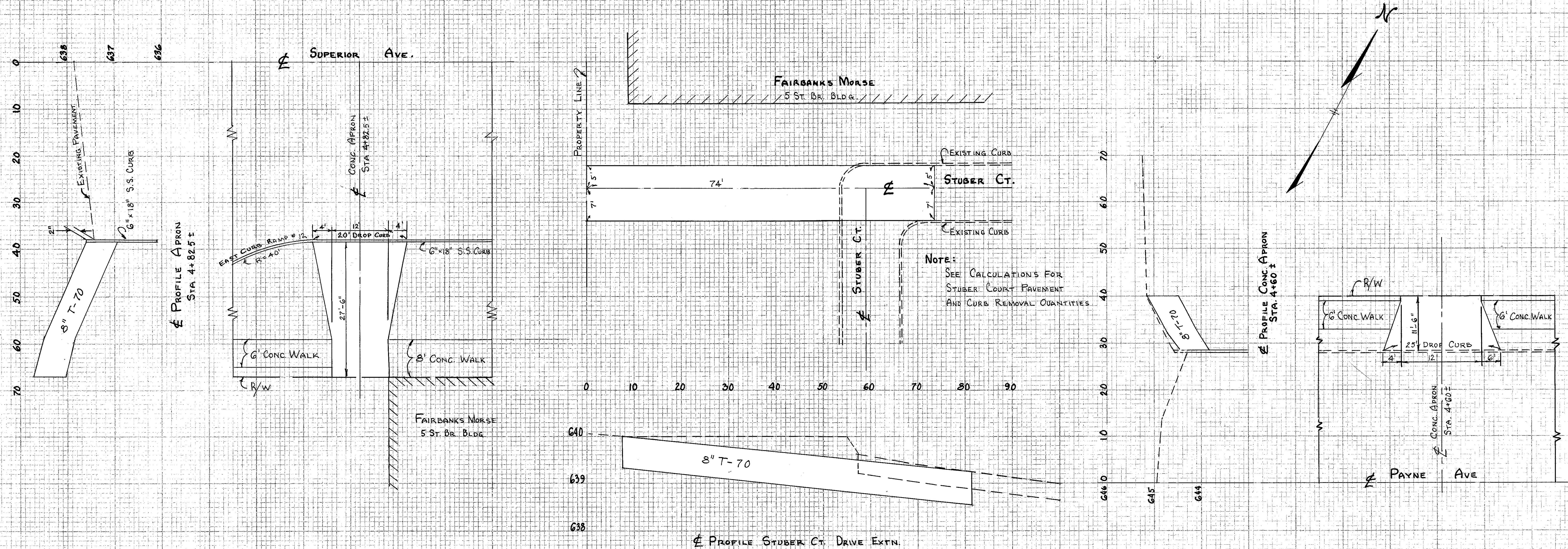
## SUPERIOR AVE., STUBER COURT, PAYNE AVE.

SCALE: HOR. 1" = 10'  
VERT. 1" = 1'

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

89  
124

CUYAHOGA COUNTY  
 CUY-42R-18.81  
 CUY-322 (1.08-1.39)



SOUTH SIDE SUPERIOR AVE. STA 4+82.5±  
 ITEM (A) PLAN SH. NO. 35  
 T-70 8" PORTLAND CEMENT CONCRETE 45.3 Sp. Yds.  
 E-101 EXCAVATION 9 Cu. Yds.

STUBER COURT DRIVE EXTENSION  
 ITEM (A) PLAN SH. NO. 35  
 T-70 8" PORTLAND CEMENT CONCRETE 98.7 Sp. Yds.  
 E-101 EXCAVATION 24 Cu. Yds.

NORTH SIDE PAYNE AVE. STA 4+60±  
 ITEM (A) PLAN SH. NO. 33  
 T-70 8" PORTLAND CEMENT CONCRETE 26.4 Sp. Yds.  
 E-101 EXCAVATION 7 Cu. Yds.

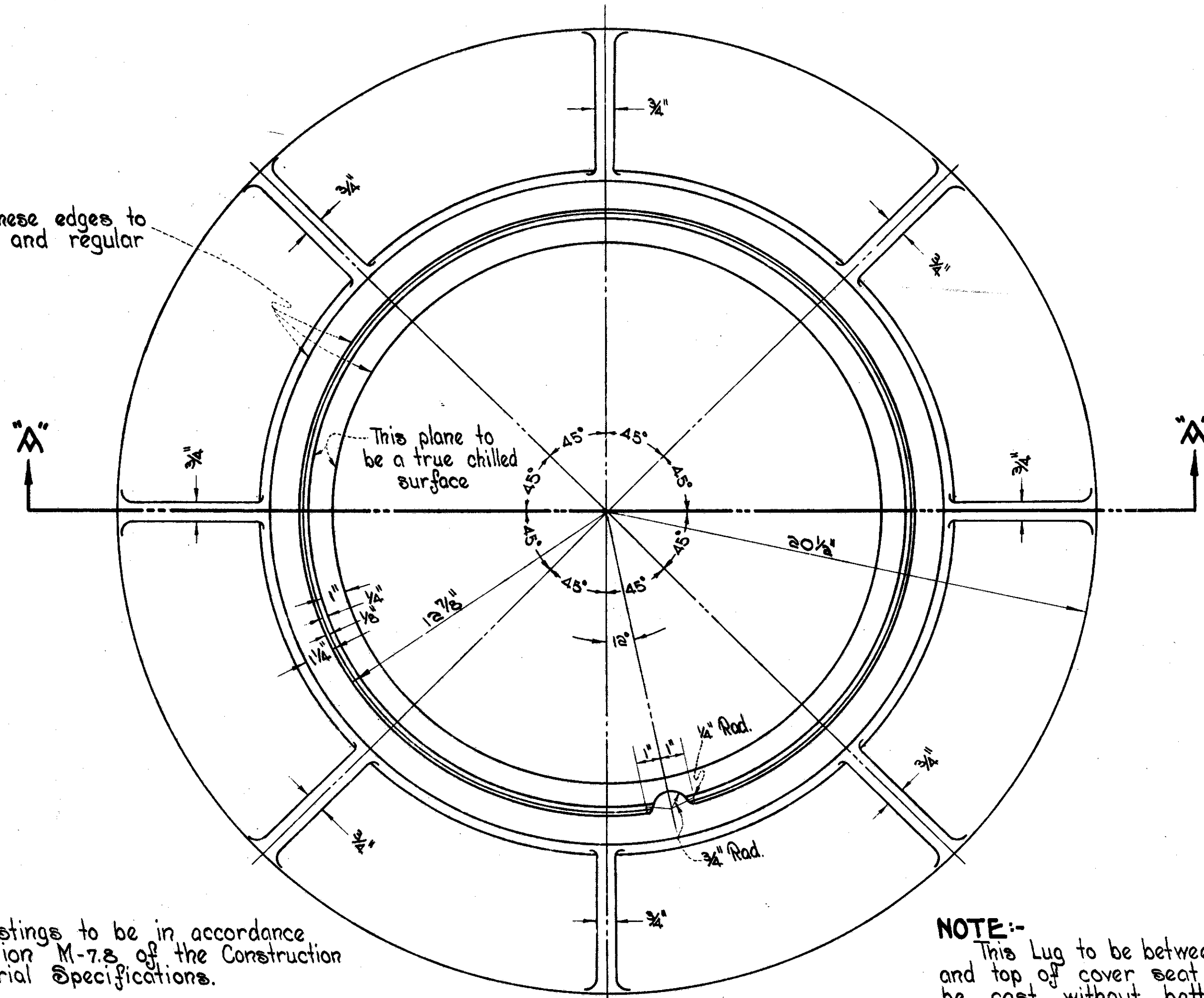


# SPECIAL MANHOLE FRAME

STANDARD CITY TYPE

Scale 3" = 1'-0"

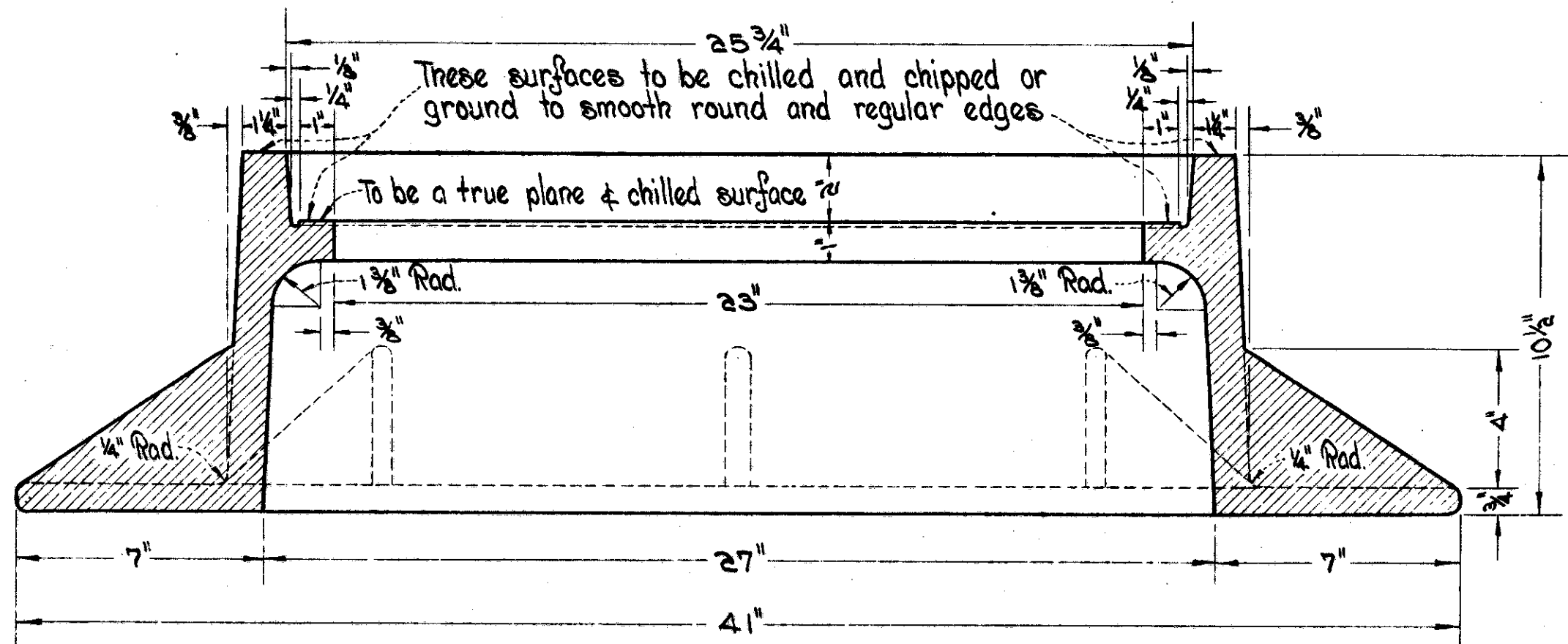
Grind or Chip these edges to smooth round and regular condition



PLAN

NOTE:- All castings to be in accordance with Section M-7.3 of the Construction and Material Specifications.

NOTE:- This Lug to be between top of frame and top of cover seat only and shall be cast without batter.



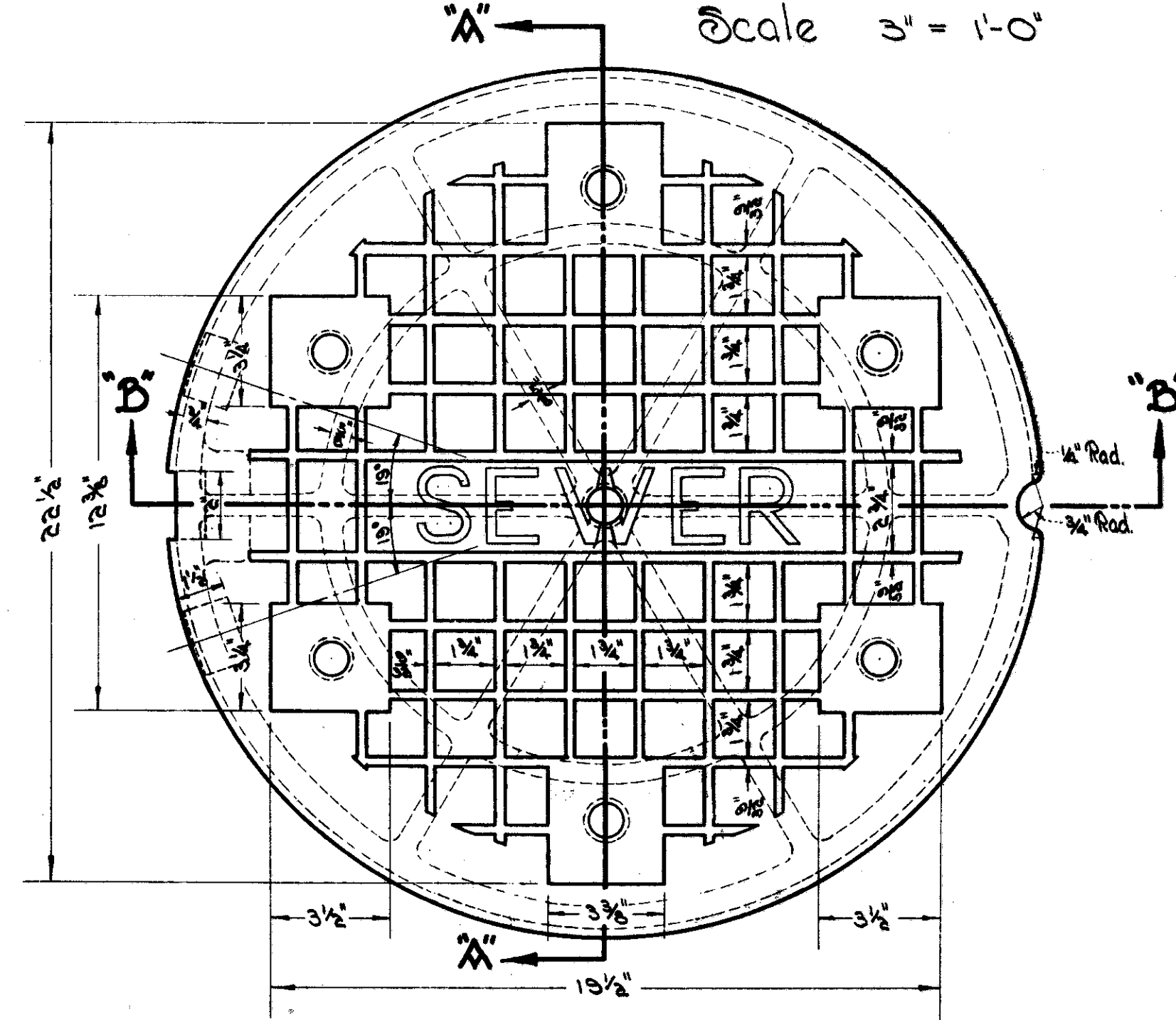
SECTION "A-A"

Weight of Frame 355 lbs.

# SPECIAL COVER

STANDARD CITY TYPE

Scale 3" = 1'-0"

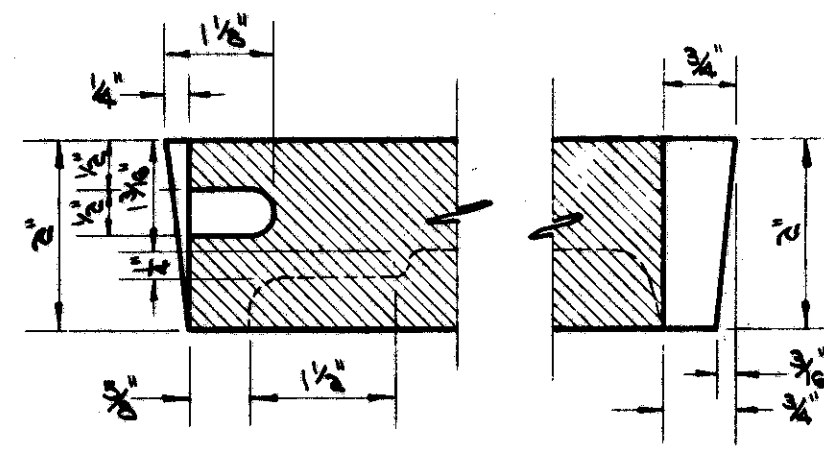


PLAN

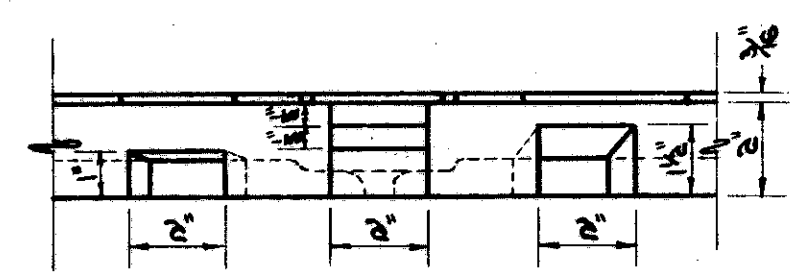
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

Cuyahoga County  
Cuy. 42-19.28  
Cuy. 322-(1.08-1.39)

91  
124



PART SECTION "B-B"  
Scale 1/2" = 1"



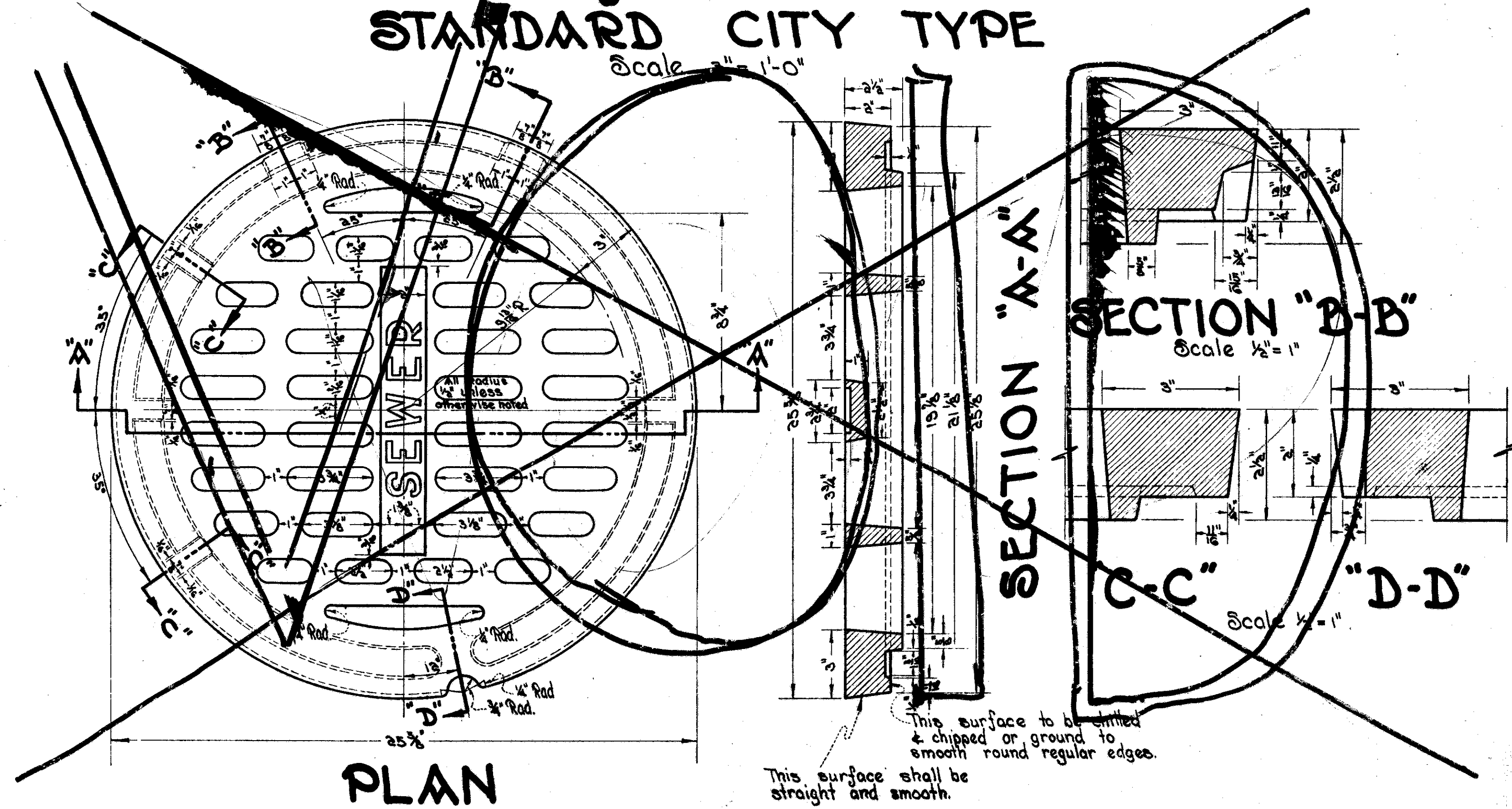
SIDE ELEVATION OF NOTCHES

Weight of Cover 155 lbs.

# SPECIAL GRATED COVER

STANDARD CITY TYPE

Scale 3" = 1'-0"



PLAN

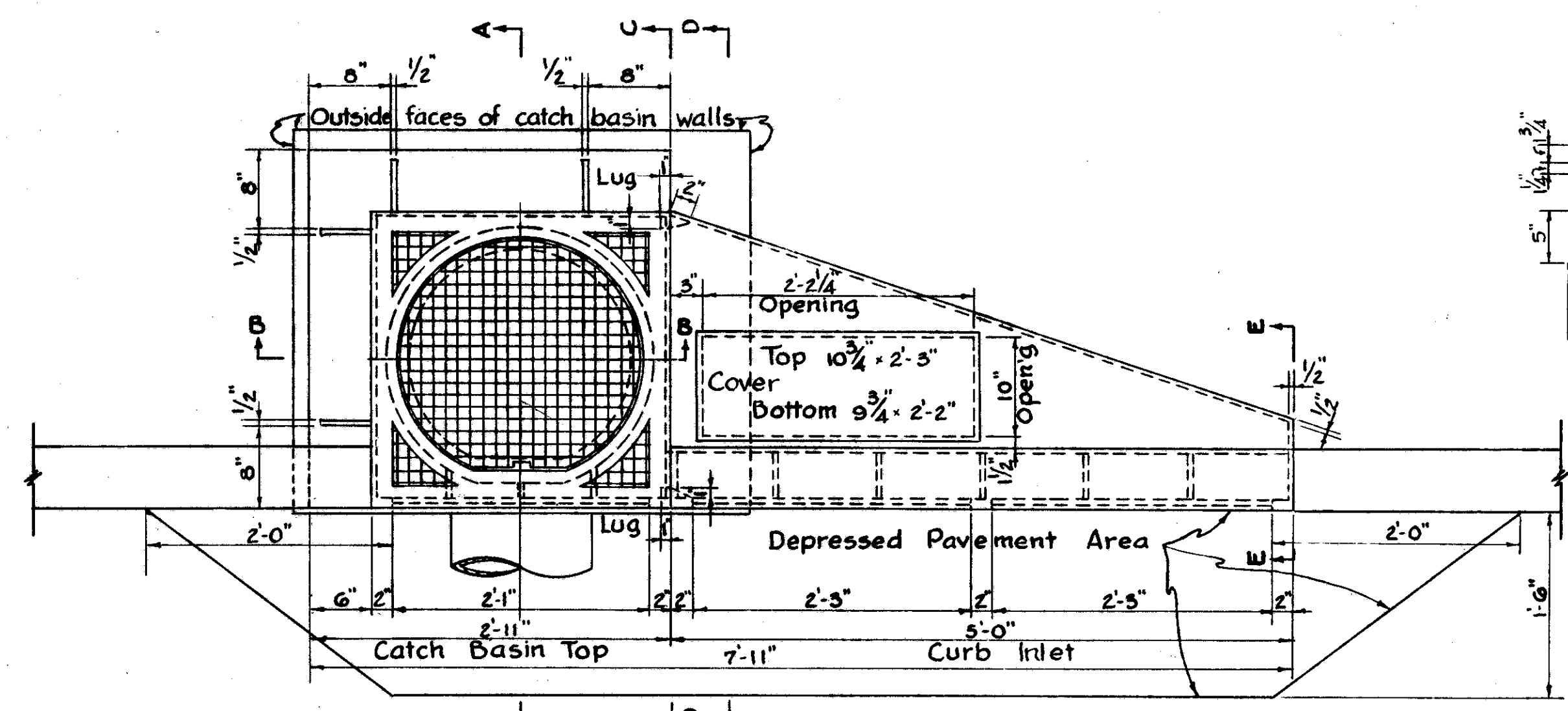
SECTION "A-A"

SECTION "B-B"  
Scale 1/2" = 1"

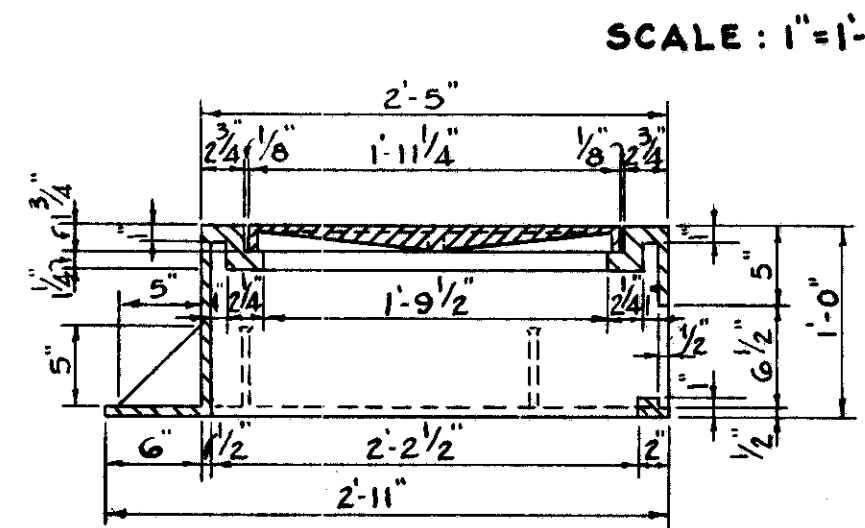
SECTION "C-C" SECTION "D-D"  
Scale 1/2" = 1"

This surface shall be straight and smooth.

# SPECIAL CURB INLET No 1

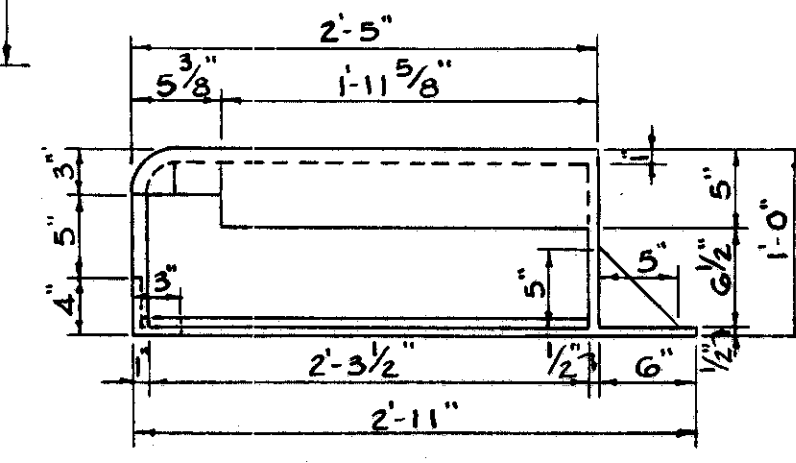


PLAN

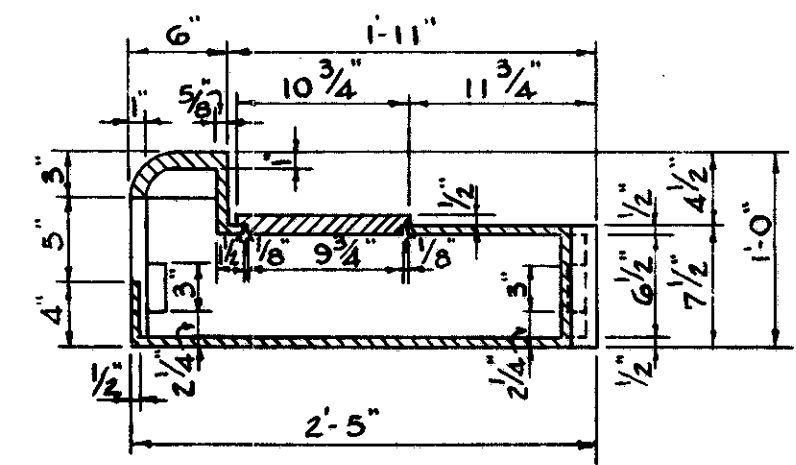


SECTION "B-B"

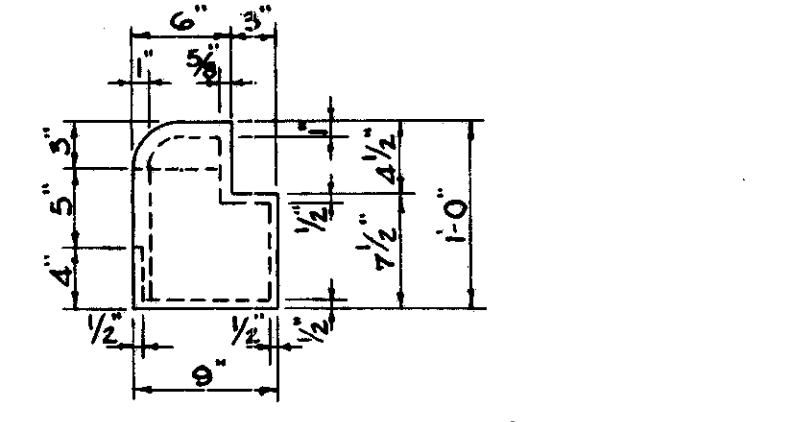
Pavement to be depressed 2" along the curb line for the entire length of the casting opening.



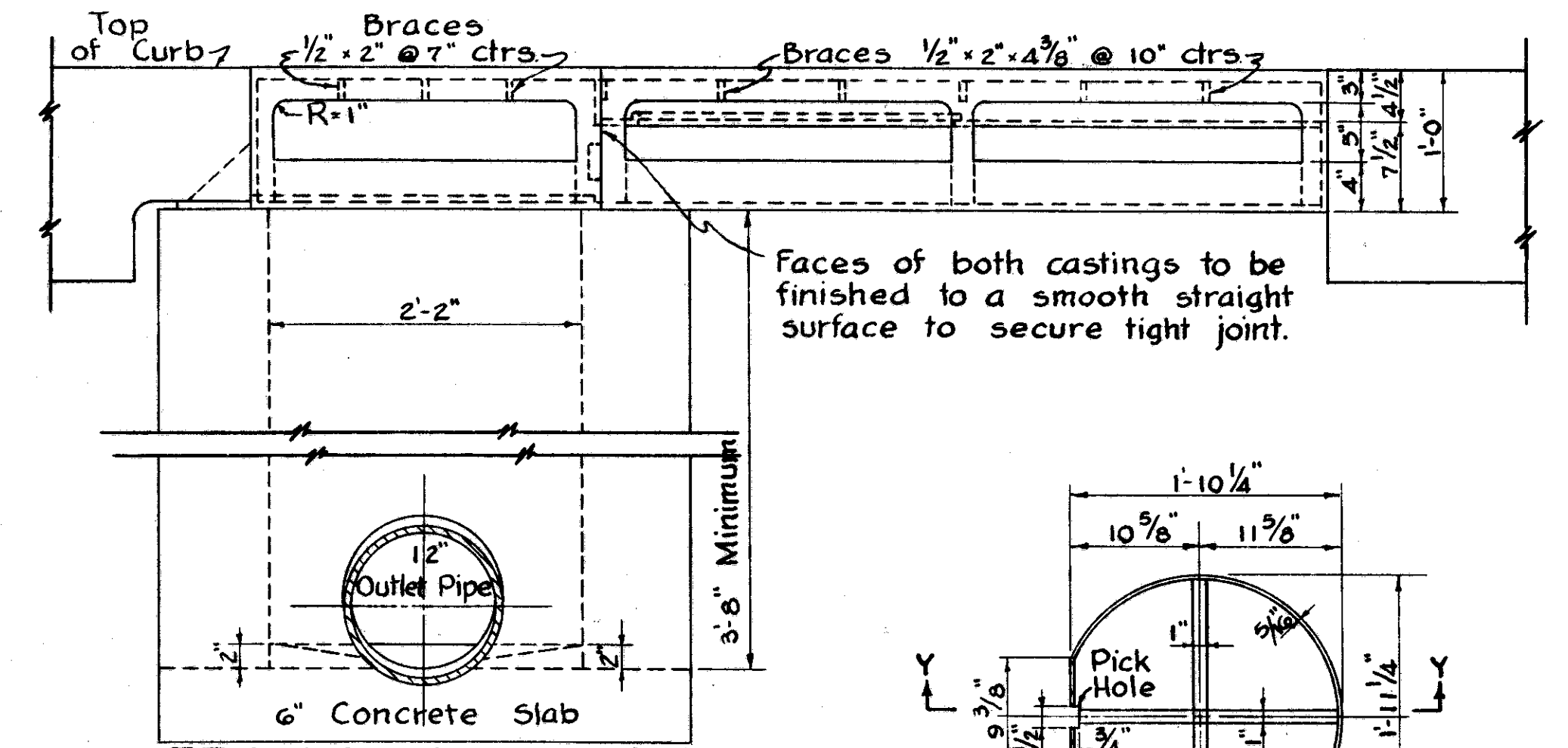
END VIEW "C-C"



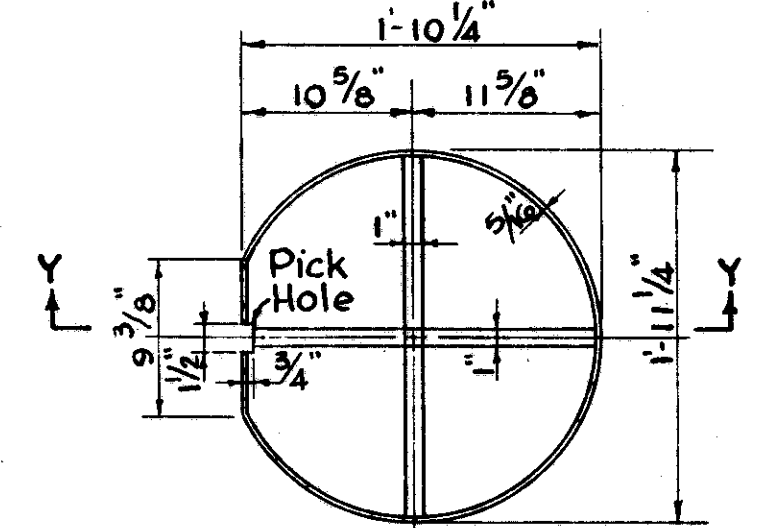
SECTION "D-D"



END VIEW "E-E"

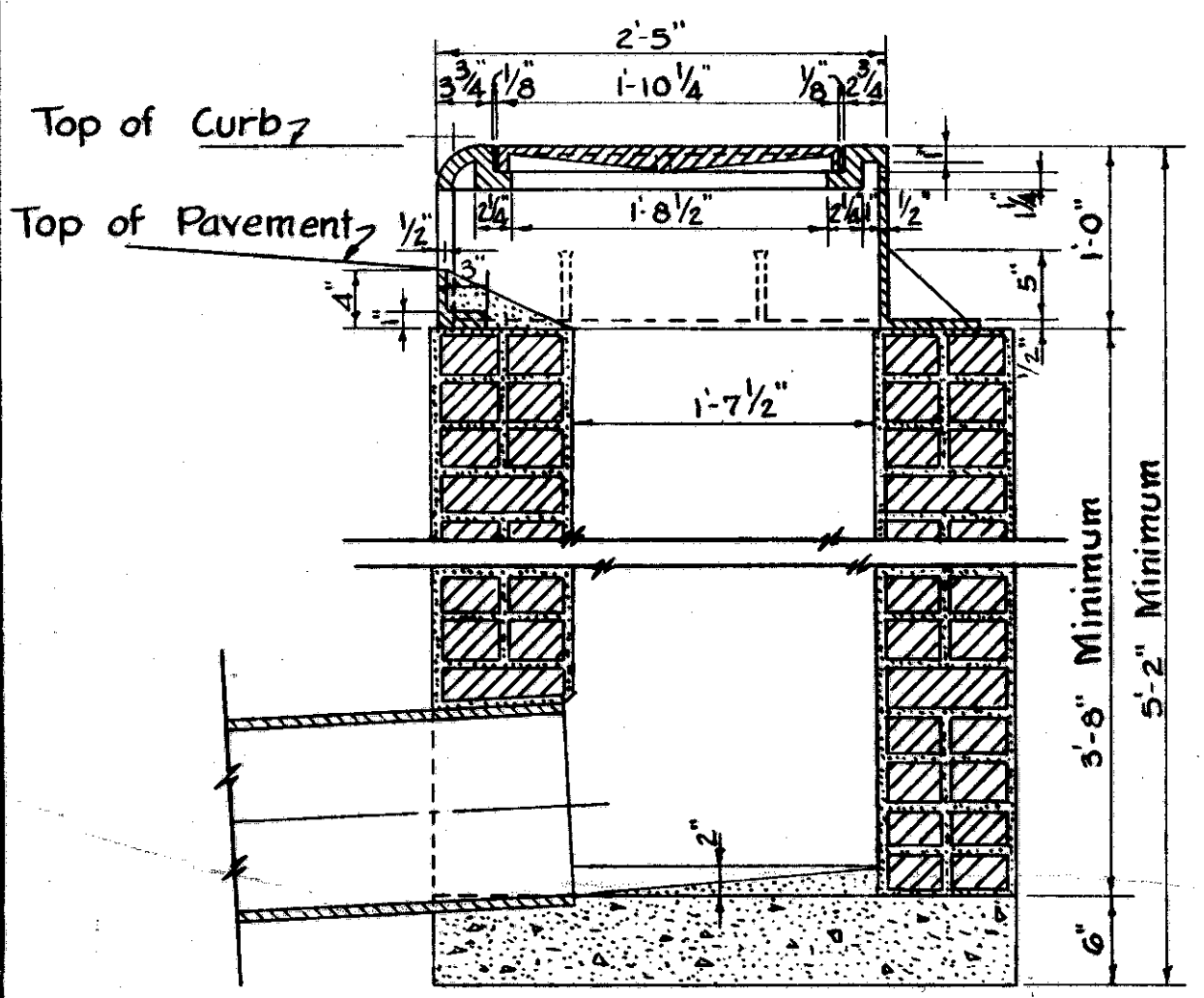


FRONT ELEVATION CASTINGS & CATCH BASIN



BOTTOM OF COVER

SECTION "Y-Y"



SECTION "A-A"

**NOTES:**

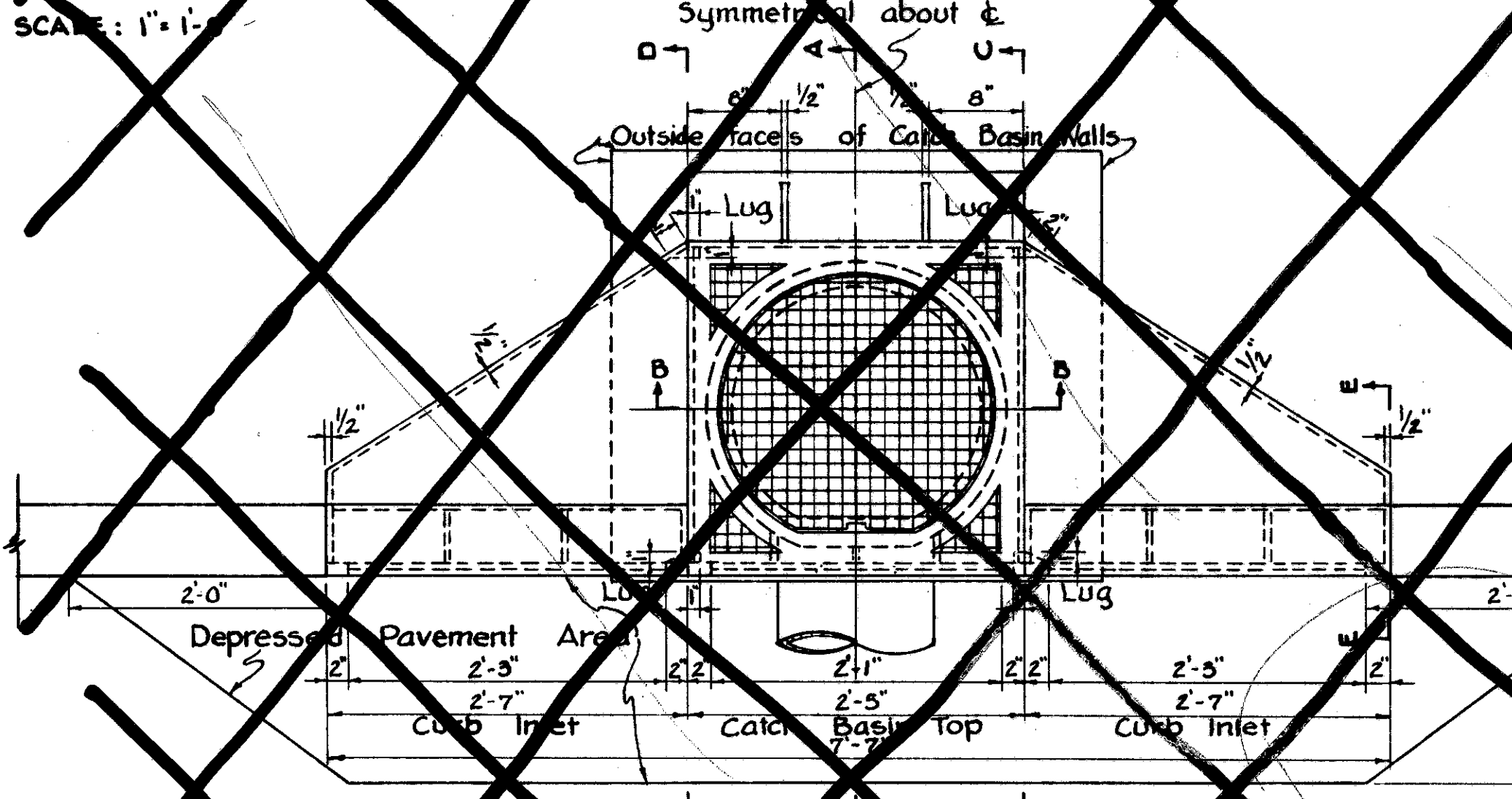
WALLS - Brick walls shall be 8" thick and plastered on the inside and outside with 1:2 cement mortar 1/2" thick. Concrete sidewalls, where used in place of brick, shall be made 6" thick of Class "C" concrete.  
 OUTLET - The outlet shall be of the size shown on the Plans and may be constructed in any side.  
 BOTTOM - Bottom shall be built as per plan of Class "C" concrete.  
 CASTINGS - Castings may be made in accordance with details shown herewith, or may be of similar design but of equal weight. All castings to be in accordance with Sec. M-78 of the Material Details.  
 Cover seat surfaces to be finished to smooth rounded edges.

**WEIGHTS**

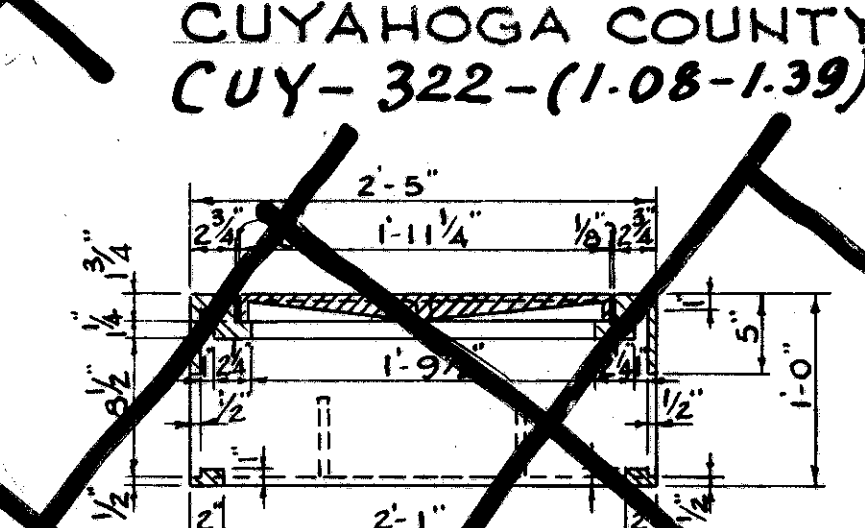
Catch Basin Cover	65 lbs.
Catch Basin Frame	600 lbs.
Curb Inlet Frame & Cover	635 lbs.

**METHOD OF ORDERING CURB INLETS:**  
 Face down-grade. The inlets that are located in the left curb are LEFT CURB INLETS. Those located in the right curb are RIGHT CURB INLETS.

# SPECIAL CURB INLET No 2

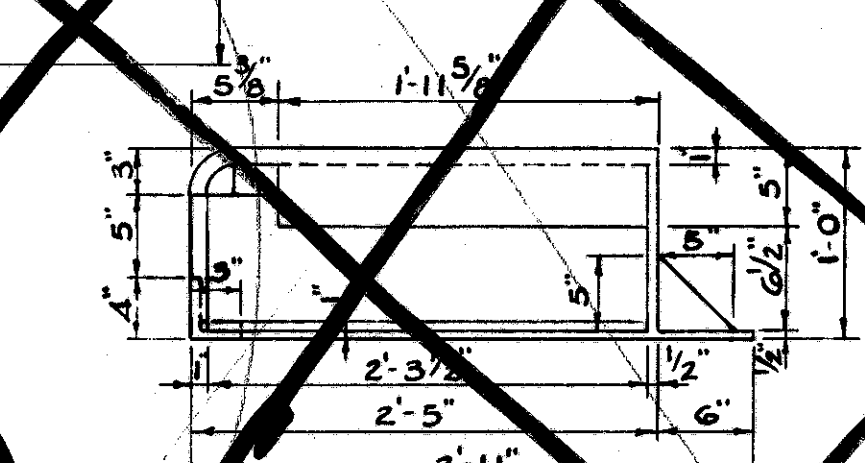


PLAN

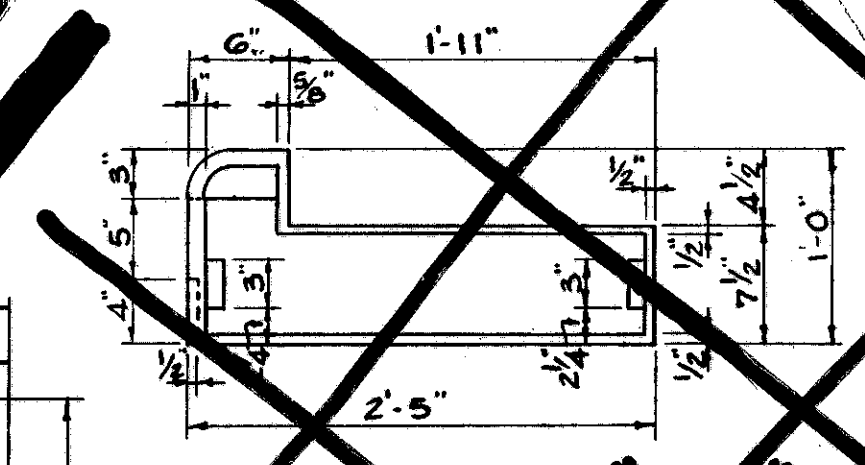


SECTION "B-B"

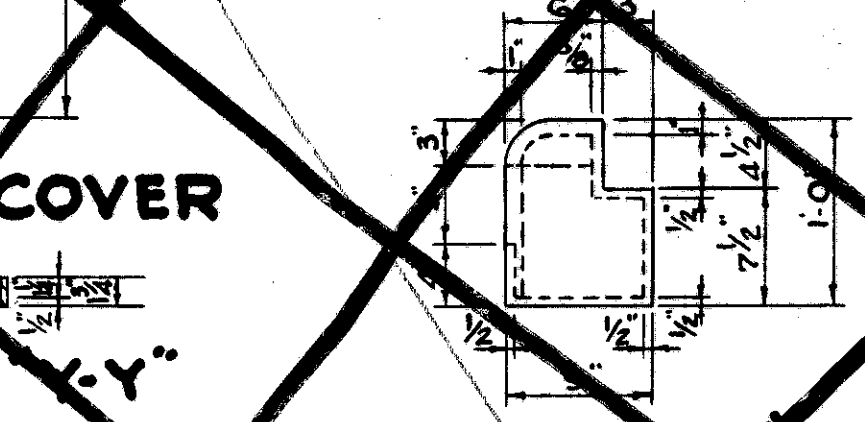
Pavement to be depressed 2" along the curb line for the entire length of the casting opening.



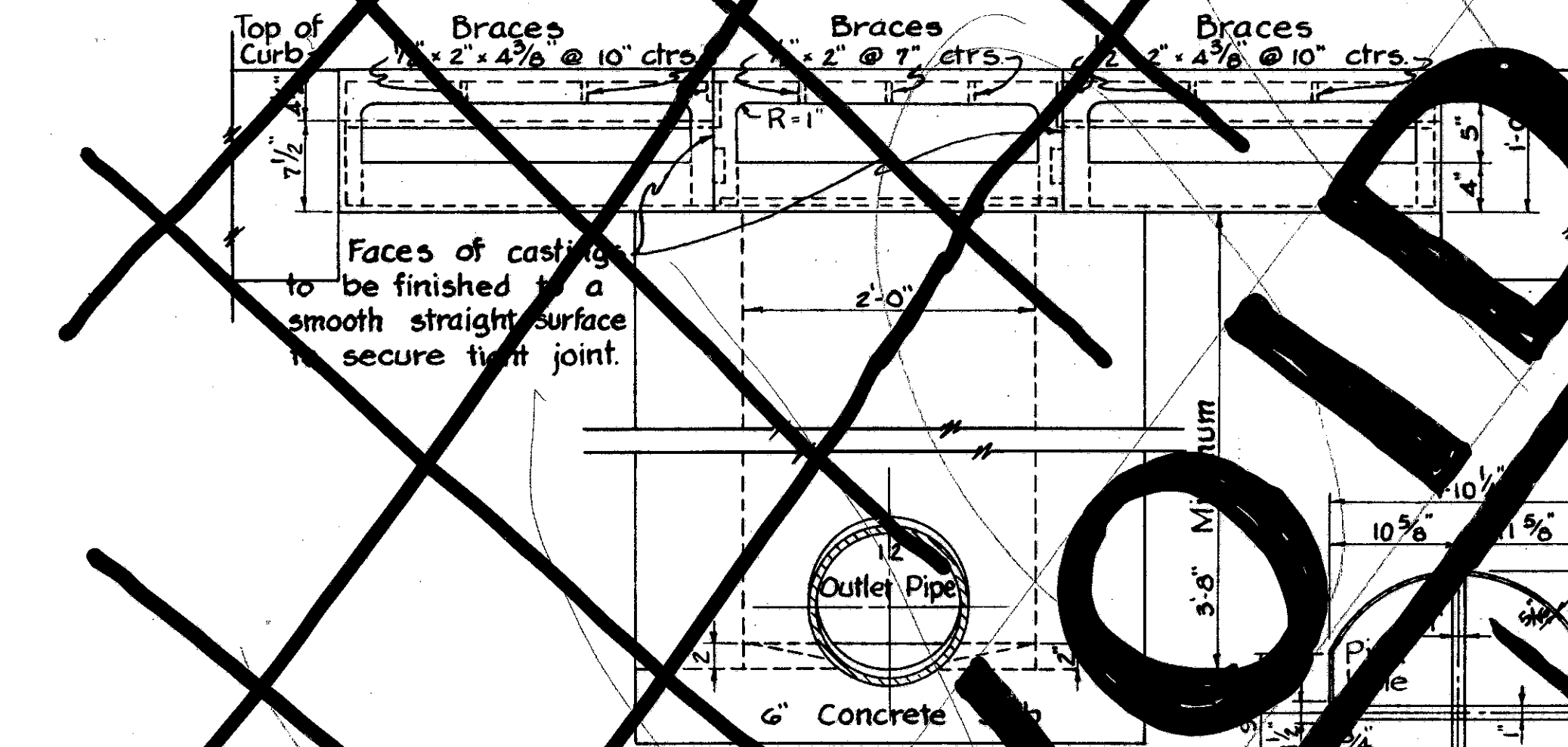
END VIEW "C-C"



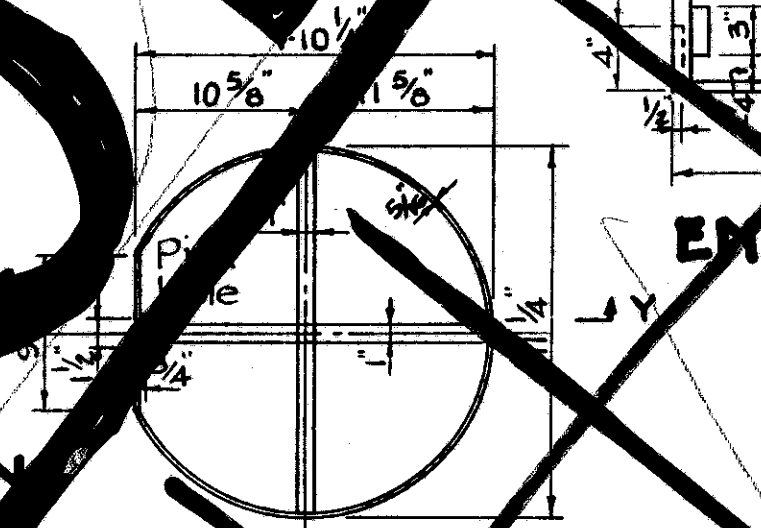
SECTION "D-D"



END VIEW "E-E"

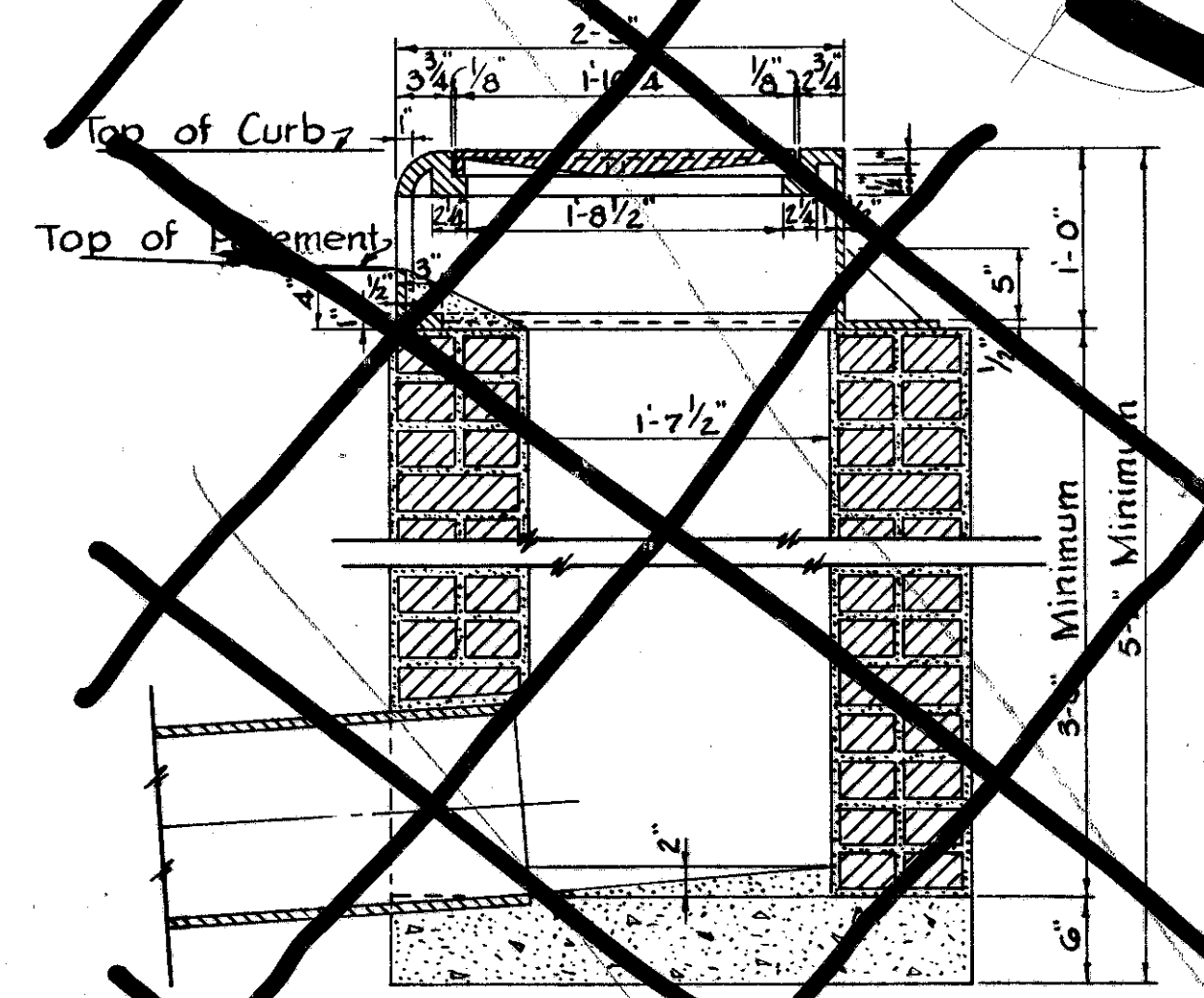


FRONT ELEVATION CASTINGS & CATCH BASIN



BOTTOM OF COVER

SECTION "Y-Y"



SECTION "A-A"

**NOTES:**

WALLS - Brick walls shall be 8" thick and plastered on the inside and outside with 1:2 cement mortar 1/2" thick. Concrete sidewalls, where used in place of brick, shall be made 6" thick of Class "C" concrete.  
 OUTLET - The outlet shall be of the size shown on the Plans and may be constructed in any side.  
 BOTTOM - Bottom shall be built as per plan of Class "C" concrete.  
 CASTINGS - Castings may be made in accordance with details shown herewith, or may be of similar design but of equal weight. All castings to be in accordance with Sec. M-78 of the Material Details.  
 Cover seat surfaces to be finished to smooth rounded edges.

**WEIGHTS**

Catch Basin Cover	65 lbs.
Catch Basin Frame	535 lbs.
Curb Inlet Frame	350 lbs. Each

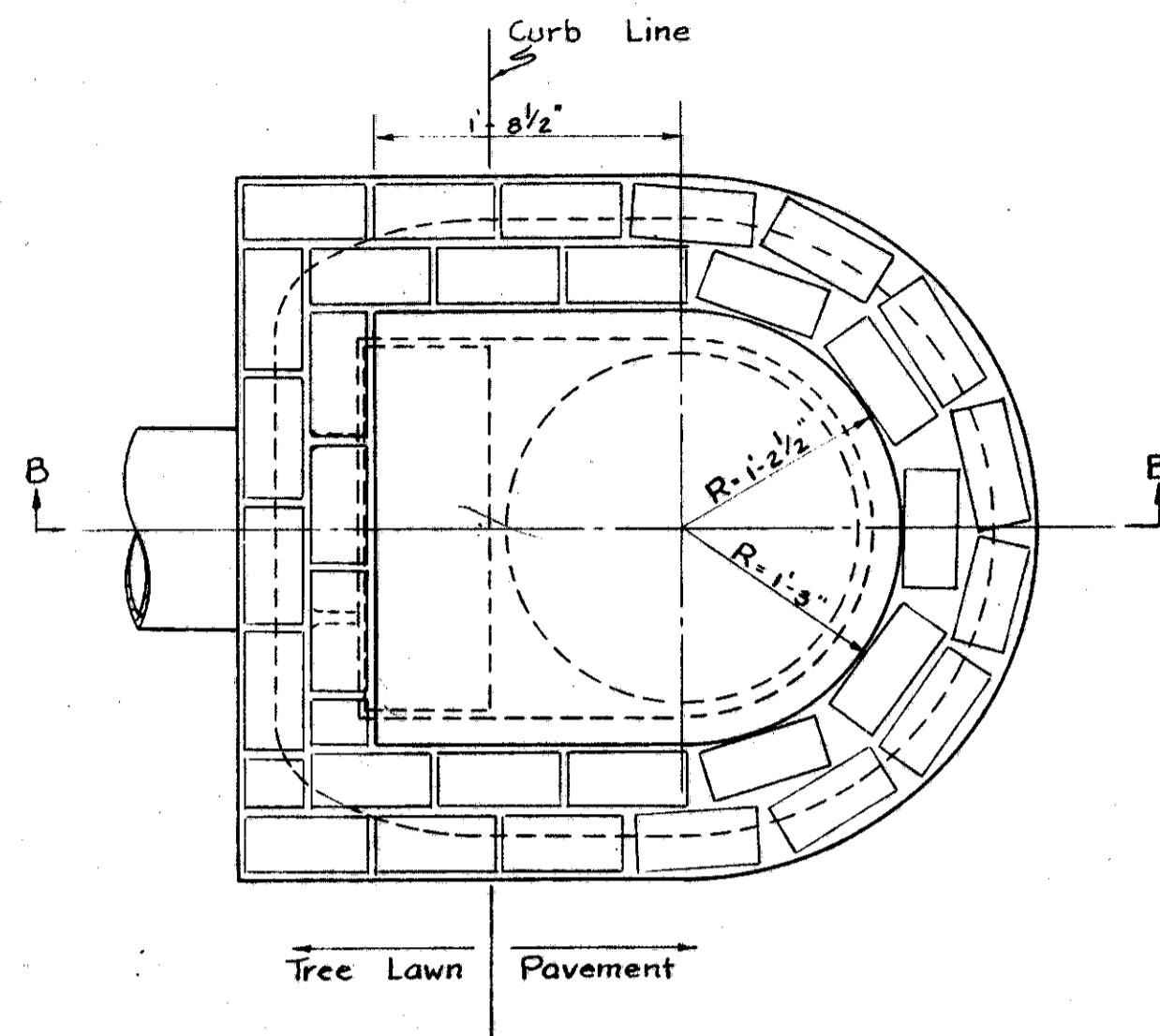
**METHOD OF ORDERING CURB INLETS:**  
 Face down-grade. The inlets that are located in the left curb are LEFT CURB INLETS. Those located in the right curb are RIGHT CURB INLETS.

**VOID**

# SPECIAL CURB INLET No 4

# SPECIAL CATCH BASIN No 4

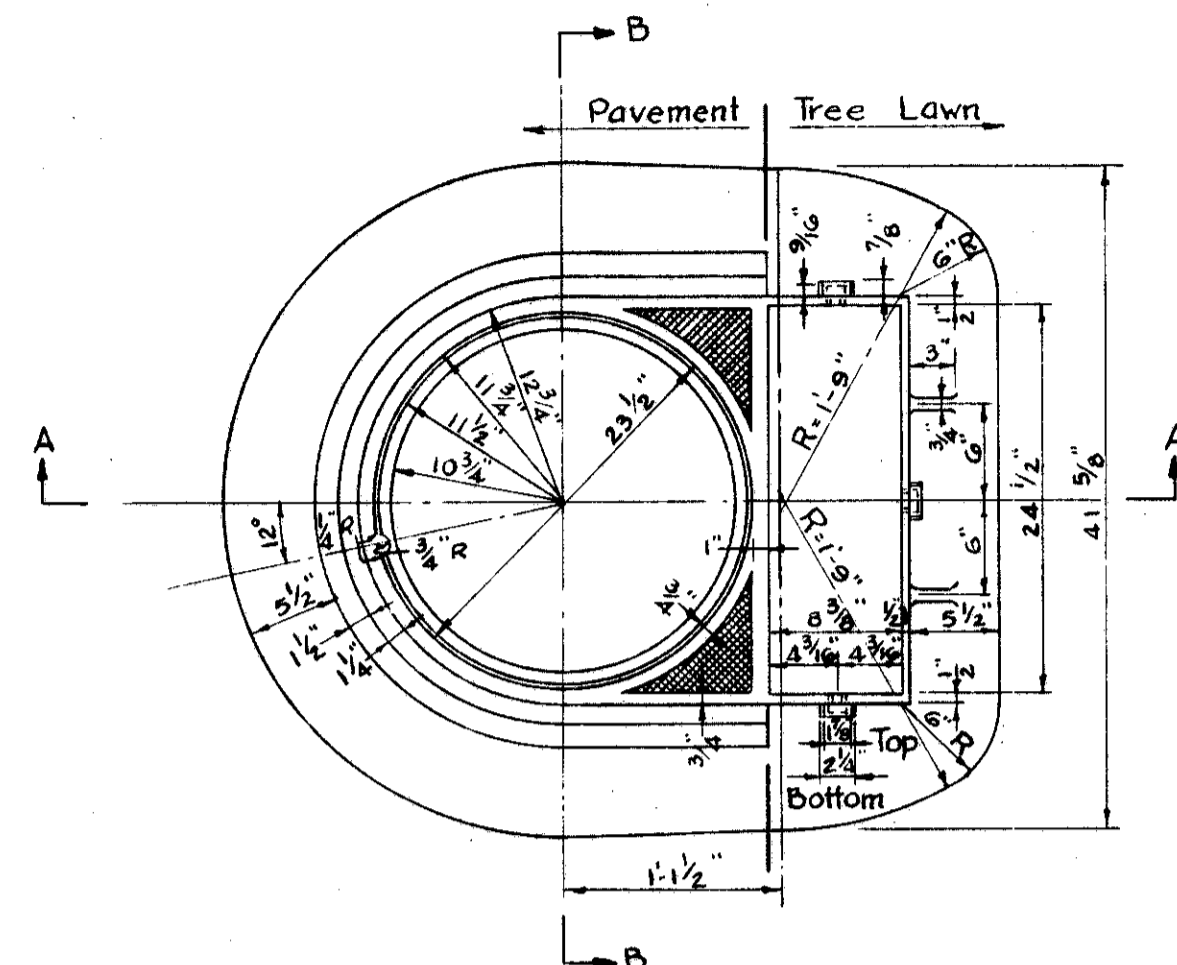
CUY-42-19.28  
CUY-322-(1.08-1.39)  
CUYAHOGA COUNTY



PLAN INLET BASIN  
VIEW 'A-A'

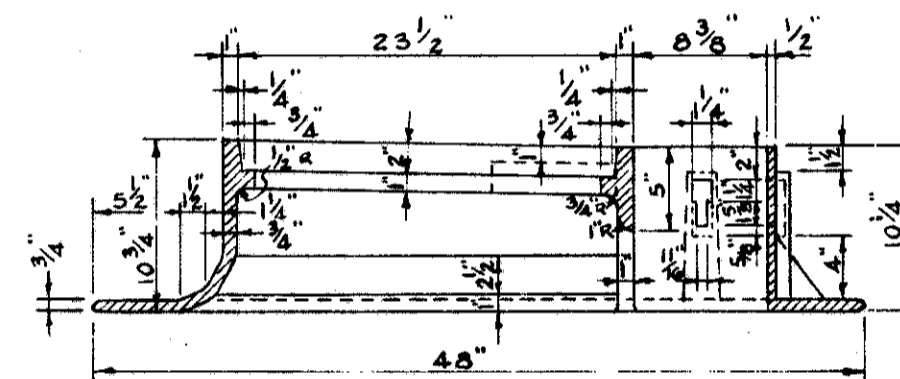
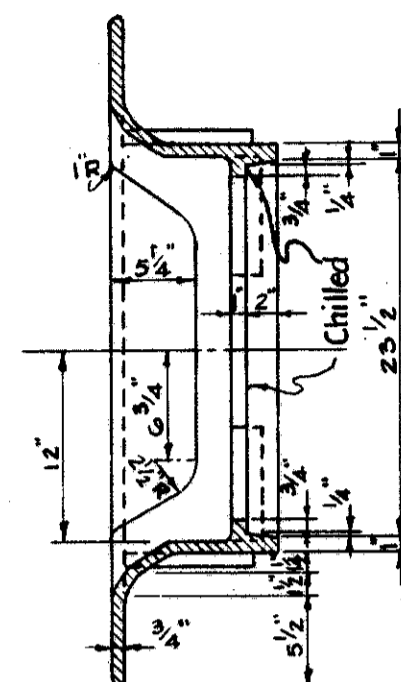
Scale: 1"=1'-0"

Position of casting shown in dashed lines.



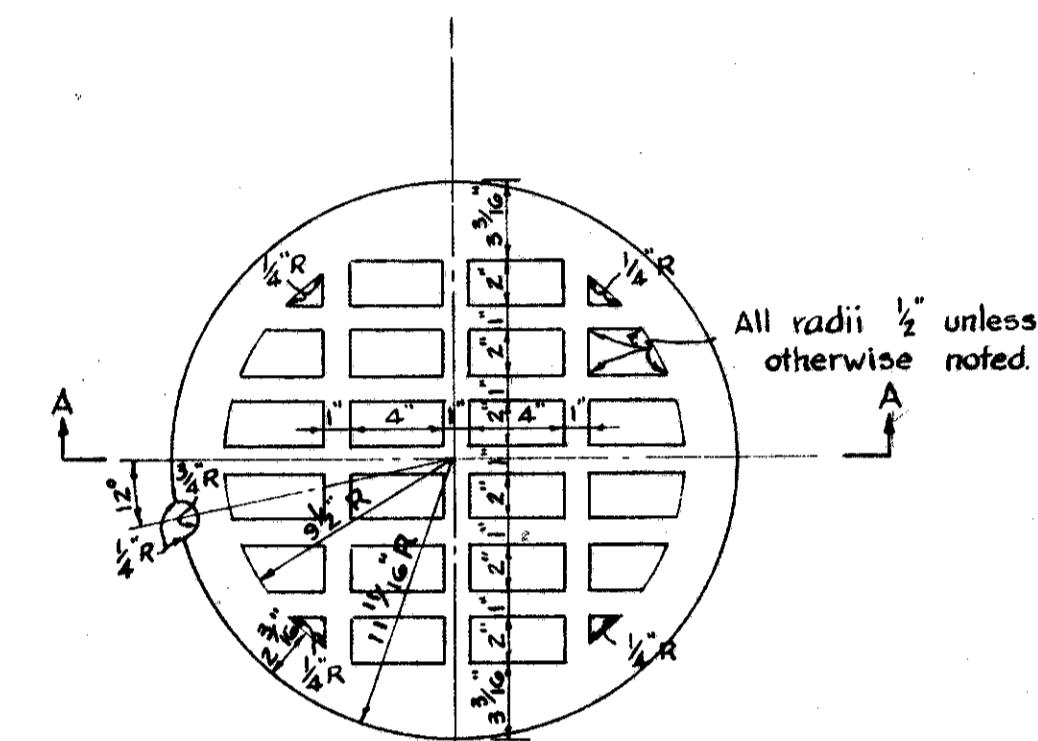
PLAN FRAME  
(CAST IRON)

SECTION 'B-B'



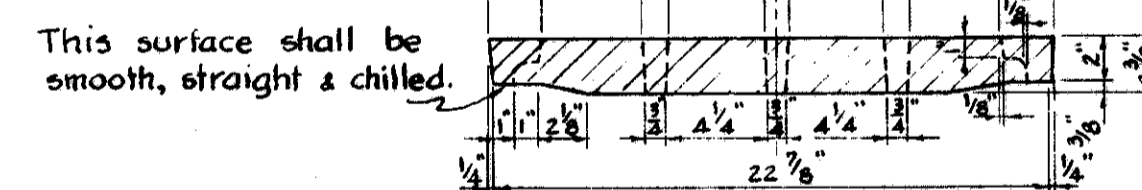
SECTION 'A-A'

Note:  
Cover seat surface to be chilled & chipped or ground to smooth round regular edge.

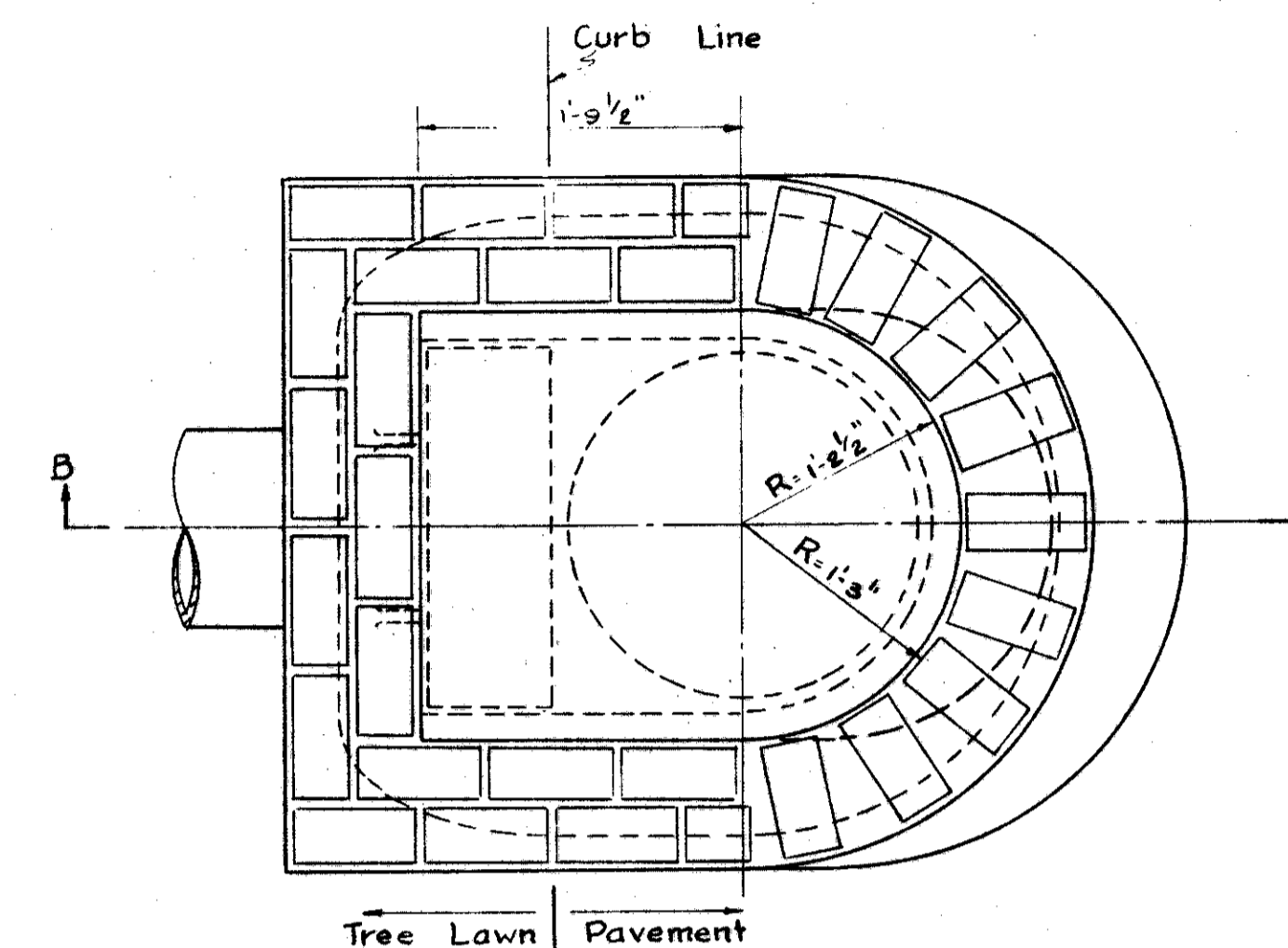


PLAN  
CITY STANDARD CAST IRON  
CATCH BASIN COVER

Scale: 1/2"=1'-0"



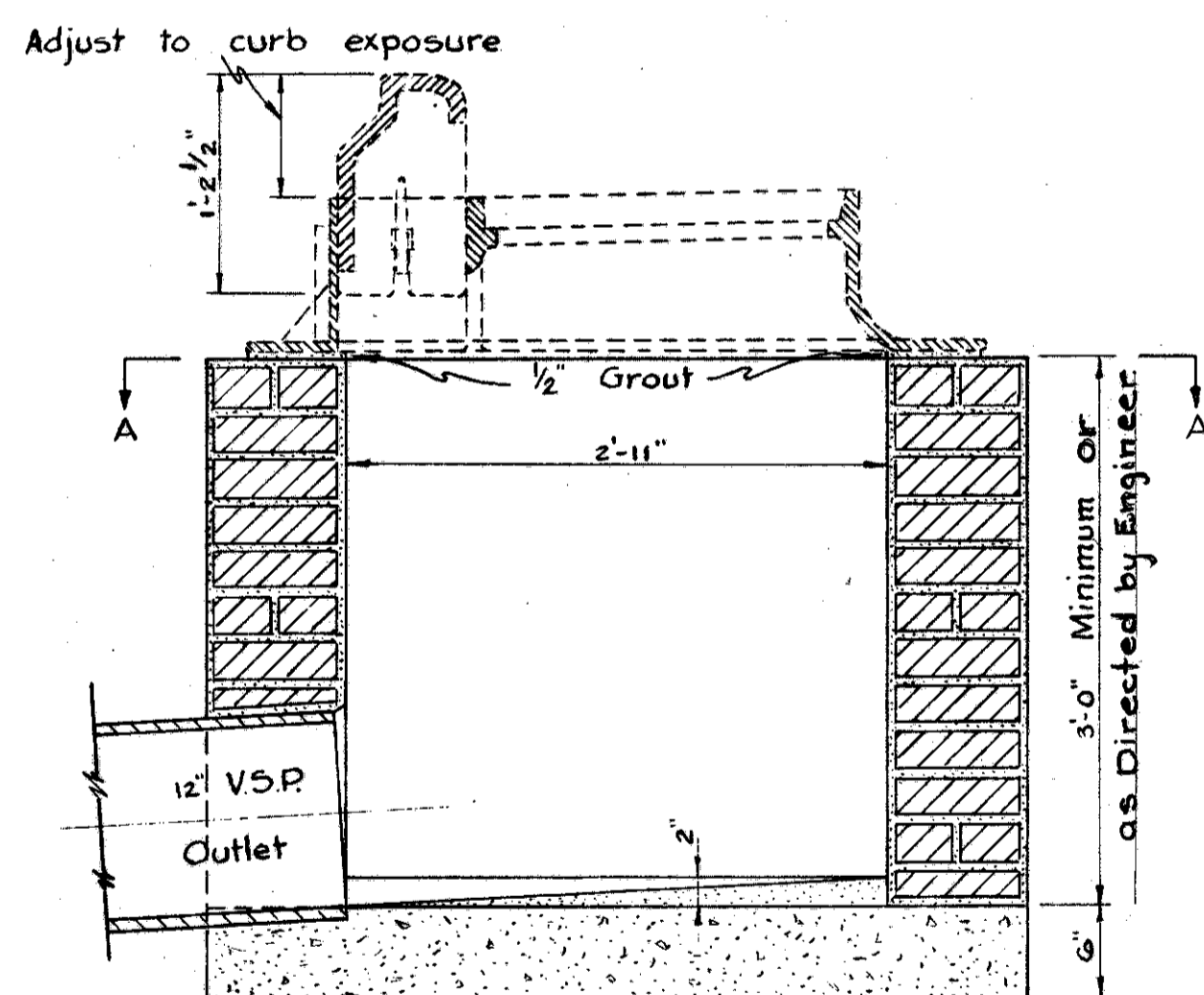
SECTION 'A-A'



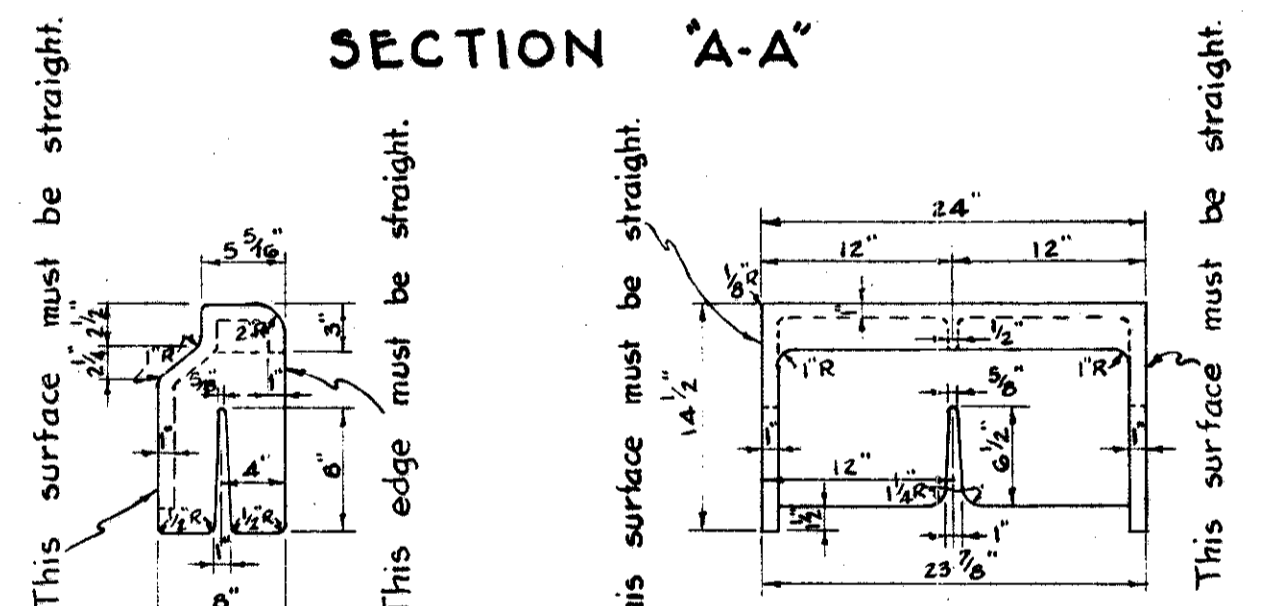
PLAN CATCH BASIN  
VIEW 'A-A'

Scale: 1"=1'-0"

Position of casting shown in dashed lines.



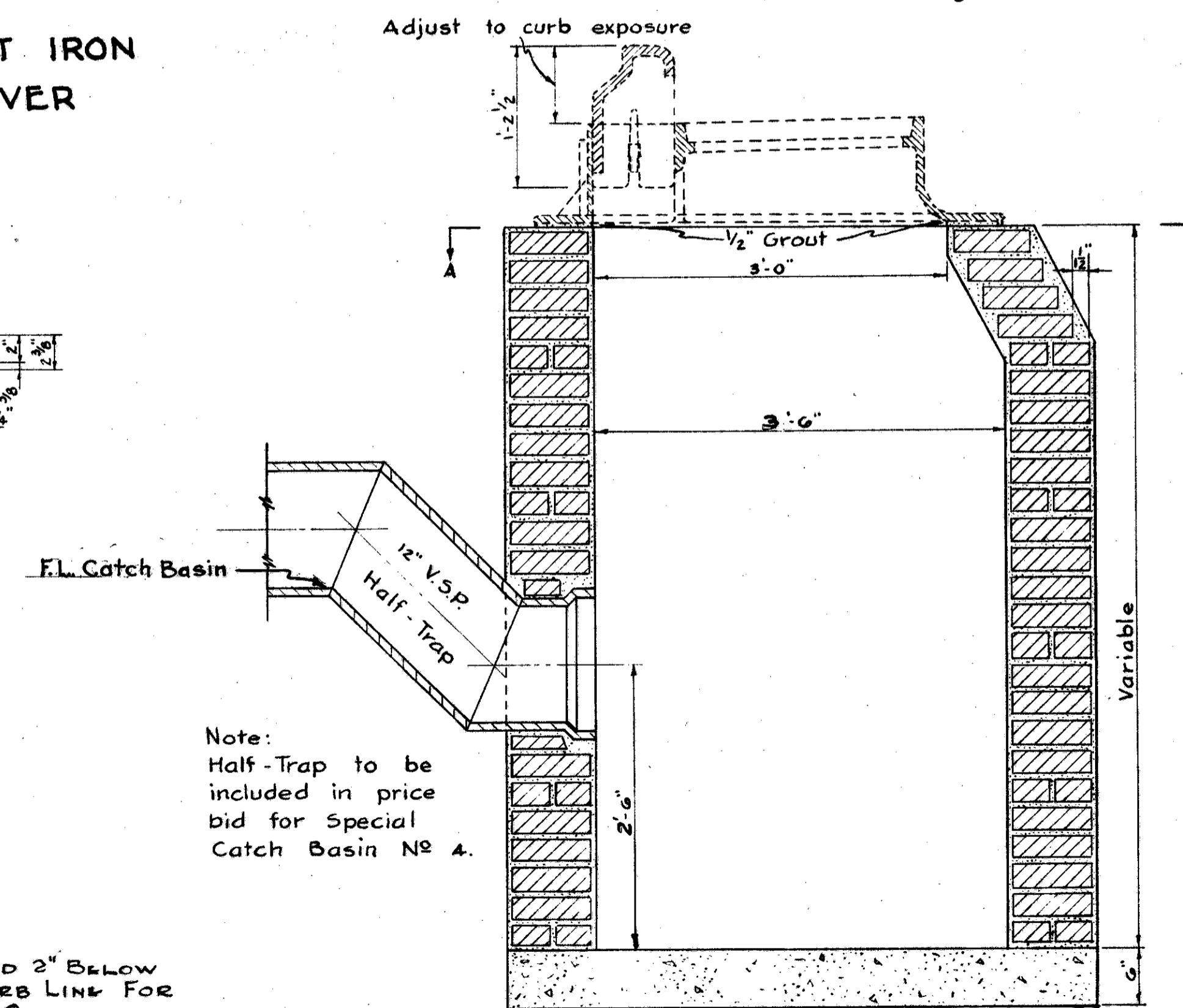
SECTION 'B-B'



END VIEW FRONT ELEVATION  
CURB BOX

CITY STANDARD CATCH BASIN FRAME  
AND CAST IRON CURB BOX

Scale: 1"=1'-0"



SECTION 'B-B'

Note:  
Half-Trap to be included in price bid for Special Catch Basin No 4.

**NOTES:**

**BRICK WALLS:**

Brick walls shall be 8" thick and plastered on the inside and outside with 1:2 cement mortar 1/2" thick. Concrete sidewalls, where used in place of brick, shall be made 6" thick of Class "C" concrete.

**OUTLET:**

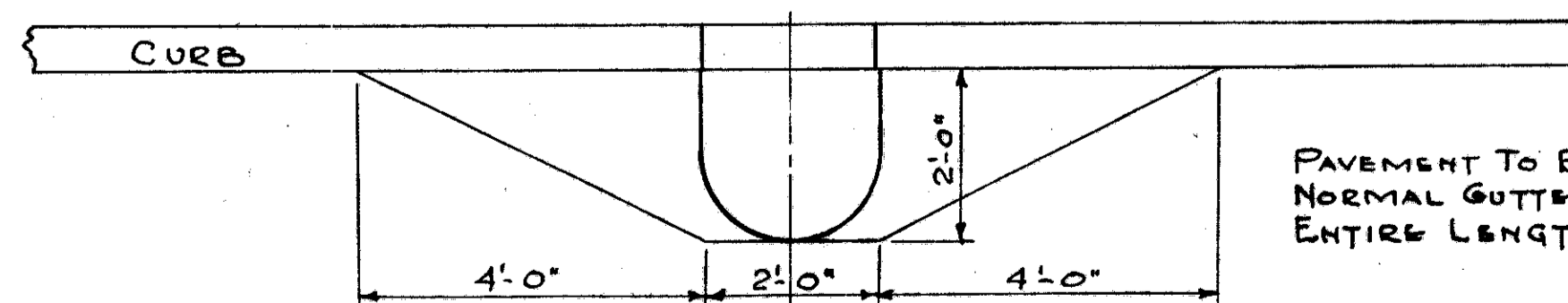
The outlet shall be of the size shown on the Plans and may be constructed in any side.

**BOTTOM:**

The bottom shall be built as per Plan, of Class "C" concrete, or of 2 courses of brick, set in mortar.

**CASTING:**

Casting to be in accordance with Section M-78 of the Material Details.



DETAIL FOR DEPRESSING PAVEMENT  
FOR ABOVE STRUCTURES

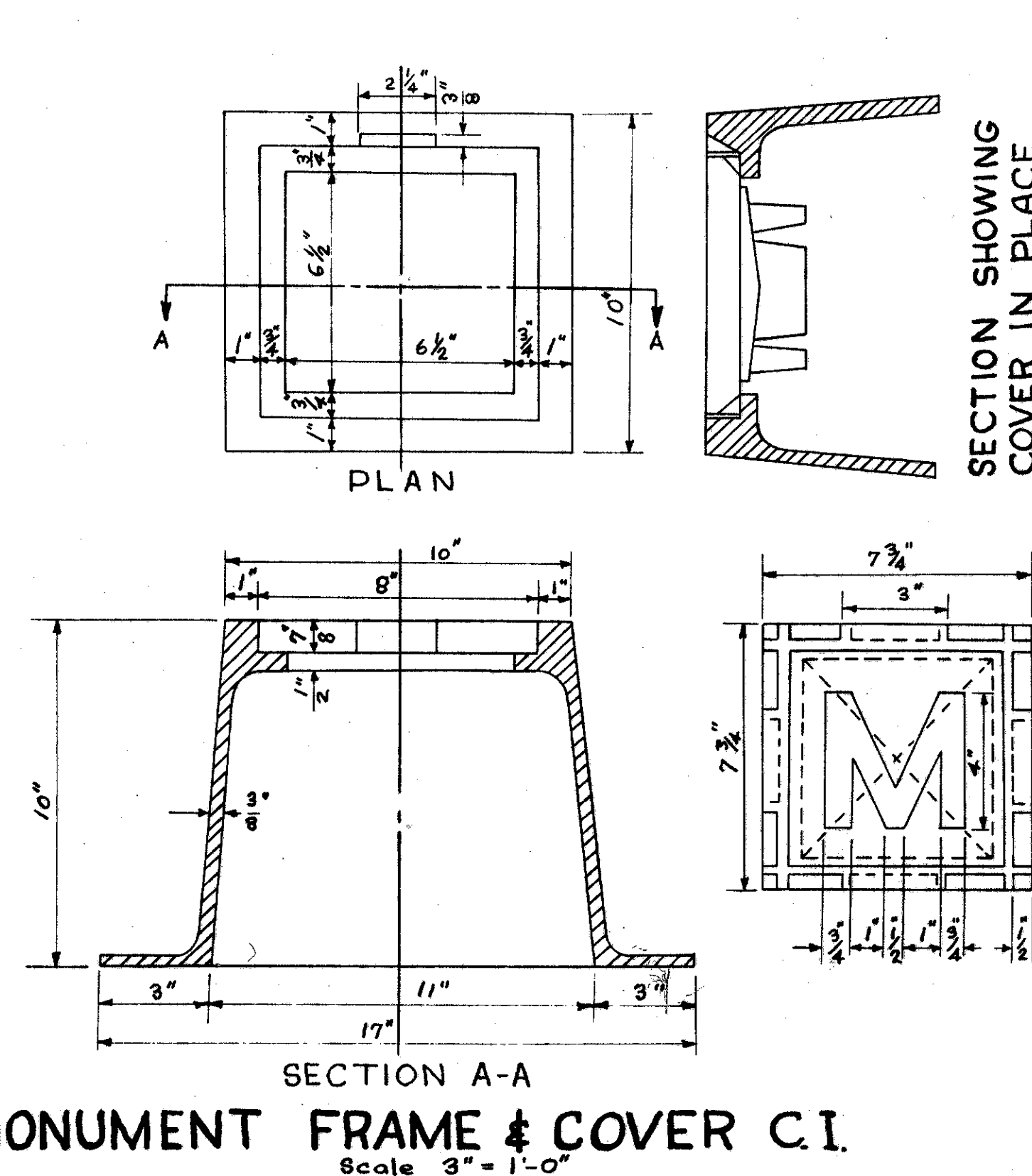
PAVEMENT TO BE DEPRESSED 2" BELOW NORMAL GUTTER ALONG CURB LINE FOR ENTIRE LENGTH OF CURB OPENING.

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

94  
124

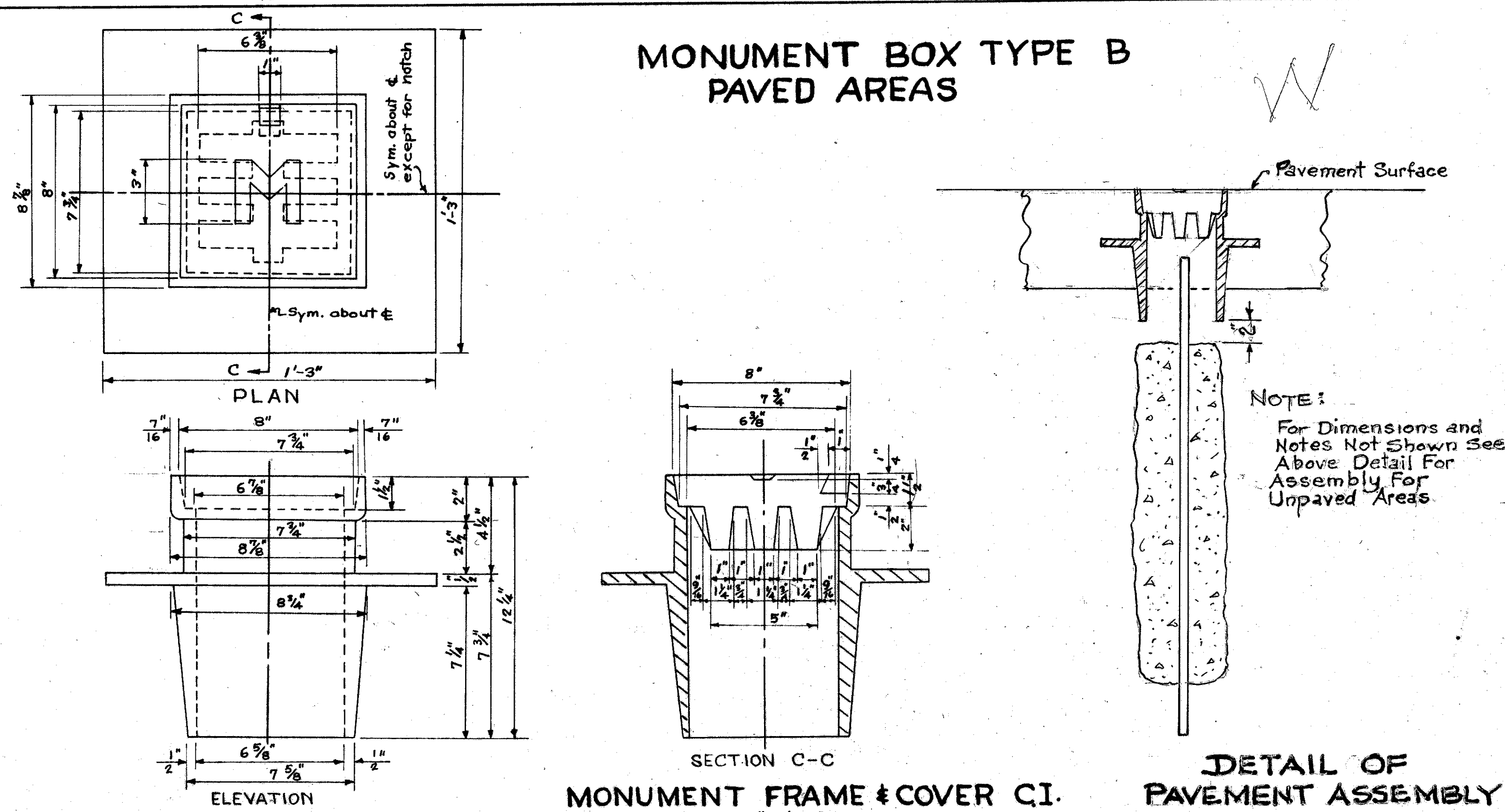
CUY-42-19.28  
CUY-322-(1.08-1.39)  
CUYAHOGA COUNTY

### MONUMENT BOX TYPE A UNPAVED AREAS



MONUMENT FRAME & COVER C.I.  
Scale 3" = 1'-0"

### MONUMENT BOX TYPE B PAVED AREAS



MONUMENT FRAME & COVER C.I.  
Scale 3" = 1'-0"

CUY-42-19.28  
 CUYAHOGA COUNTY  
 SCALE: 1"=50'  
 (UY-322-(1.08-1.39))

TYPE	POLE	BRACKET	FOUNDATION	PULL BOX
W	TYPICAL-MOD	2-10 FOOT	REGULAR	REGULAR
X	TYPICAL	1-10 FOOT	"	"
Y	TYPICAL-MOD	1-17 FOOT	SPECIAL	SPECIAL

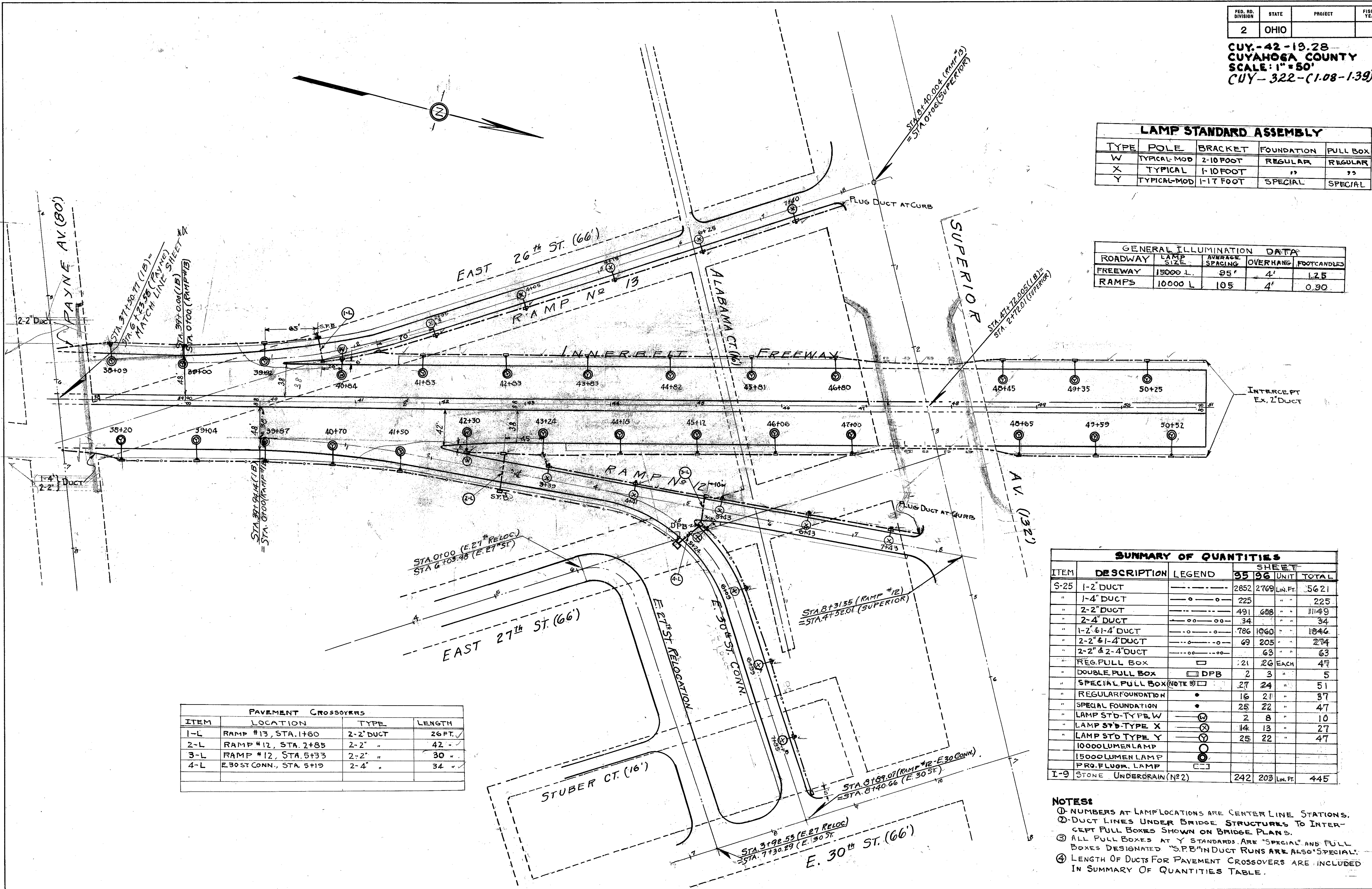
ROADWAY	LAMP SIZE	AVERAGE SPACING	OVERHANG	FOOTCANDLES
FREEWAY	15000 L.	95'	4'	1.25
RAMP	10000 L.	105'	4'	0.90

ITEM	LOCATION	TYPE	LENGTH
1-L	RAMP #13, STA. 1+60	2-2" DUCT	26 FT.
2-L	RAMP #12, STA. 2+85	2-2" "	42 "
3-L	RAMP #12, STA. 5+33	2-2" "	30 "
4-L	E. 30 ST. CONN., STA. 5+19	2-4" "	34 "

ITEM	DESCRIPTION	LEGEND	SHEET		TOTAL
			95	96	
S-25	1-2" DUCT	---	2852	2769	5621 LIN. FT.
"	1-4" DUCT	---o---	225	"	225
"	2-2" DUCT	-----	491	688	1179
"	2-4" DUCT	---oo---	34	"	34
"	1-2" & 1-4" DUCT	---o---o---	786	1060	1846
"	2-2" & 1-4" DUCT	---oo---o---	69	205	274
"	2-2" & 2-4" DUCT	---oo---oo---	63	"	63
"	REG. PULL BOX	□	21	26	47 EACH
"	DOUBLE PULL BOX	□ DPB	2	3	5
"	SPECIAL PULL BOX (NOTE 3)	□	27	24	51
"	REGULAR FOUNDATION	•	16	21	37
"	SPECIAL FOUNDATION	•	25	22	47
"	LAMP STD. TYPE W	⊙	2	8	10
"	LAMP STD. TYPE X	⊗	14	13	27
"	LAMP STD. TYPE Y	⊙	25	22	47
"	10000 LUMEN LAMP	⊙			
"	15000 LUMEN LAMP	⊙			
"	PRO. FLUOR. LAMP	⊙			
I-9	STONE UNDERDRAIN (Nº 2)	□	242	203	445 LIN. FT.

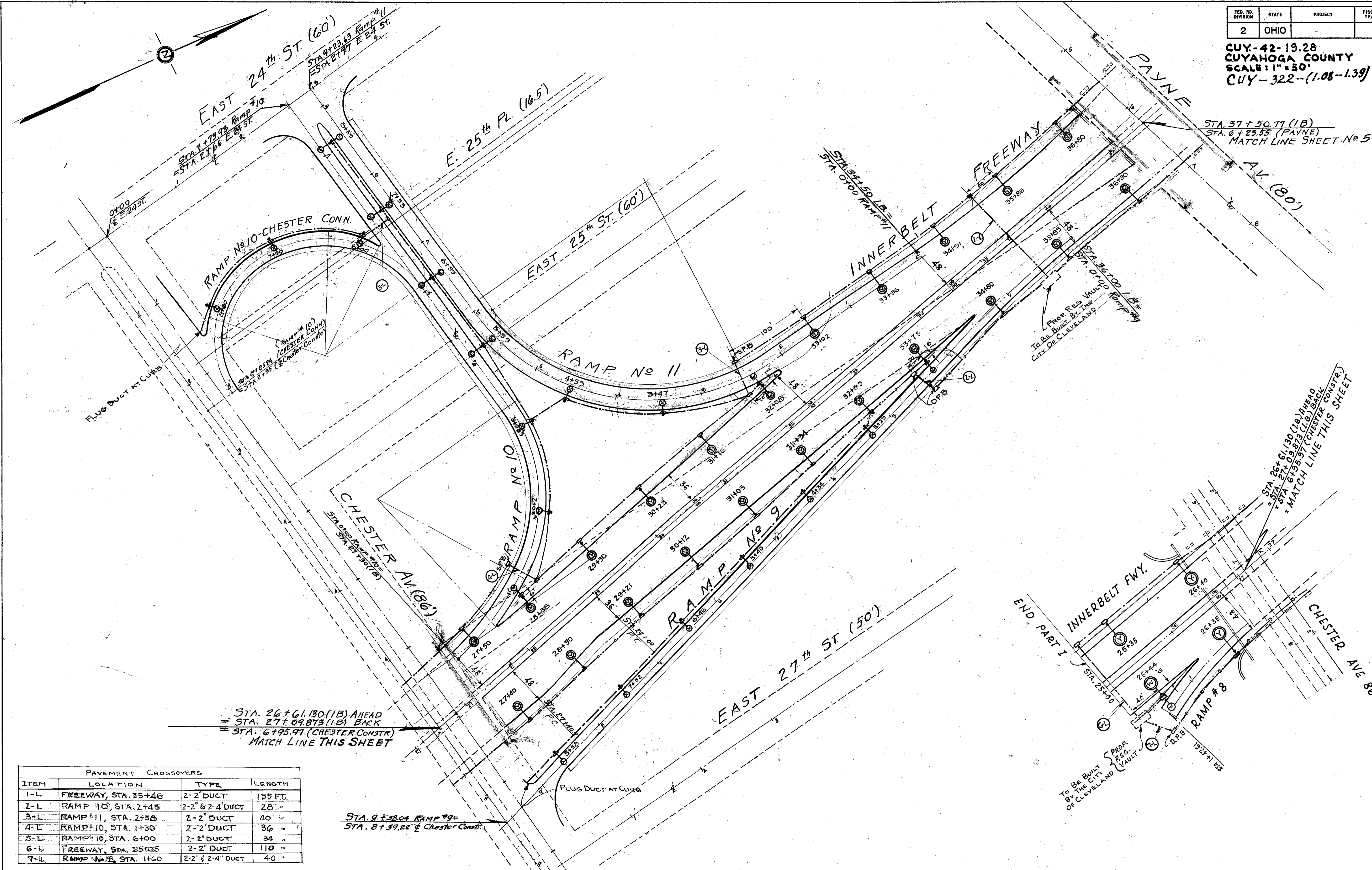
**NOTES:**  
 ① NUMBERS AT LAMP LOCATIONS ARE CENTER LINE STATIONS.  
 ② DUCT LINES UNDER BRIDGE STRUCTURES TO INTERCEPT FULL BOXES SHOWN ON BRIDGE PLANS.  
 ③ ALL FULL BOXES AT Y STANDARDS ARE "SPECIAL" AND FULL BOXES DESIGNATED "S.P.B." IN DUCT RUNS ARE ALSO "SPECIAL".  
 ④ LENGTH OF DUCTS FOR PAVEMENT CROSSOVERS ARE INCLUDED IN SUMMARY OF QUANTITIES TABLE.

STREET LIGHTING





CUY-42-19.28  
 CUYAHOGA COUNTY  
 SCALE: 1" = 50'  
 CUY-322-(1.08-1.39)



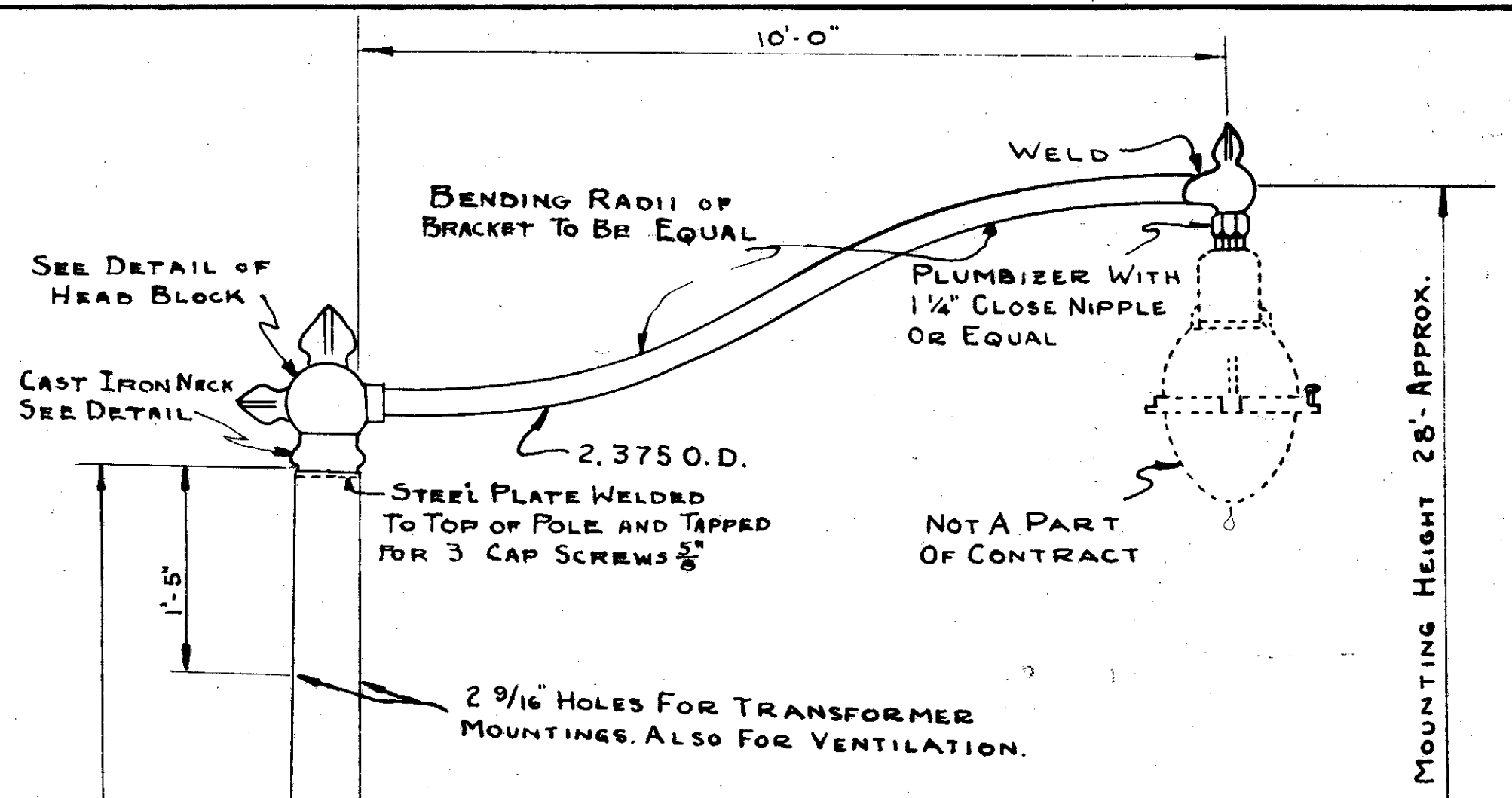
STA. 26+61.130 (1B) AHEAD  
 = STA. 27+09.873 (1B) BACK  
 = STA. 6+95.97 (CHESTER CONSTR)  
 MATCH LINE THIS SHEET

STA. 9+58.04 RAMP #9=  
 STA. 8+39.82 & Chester Constr.

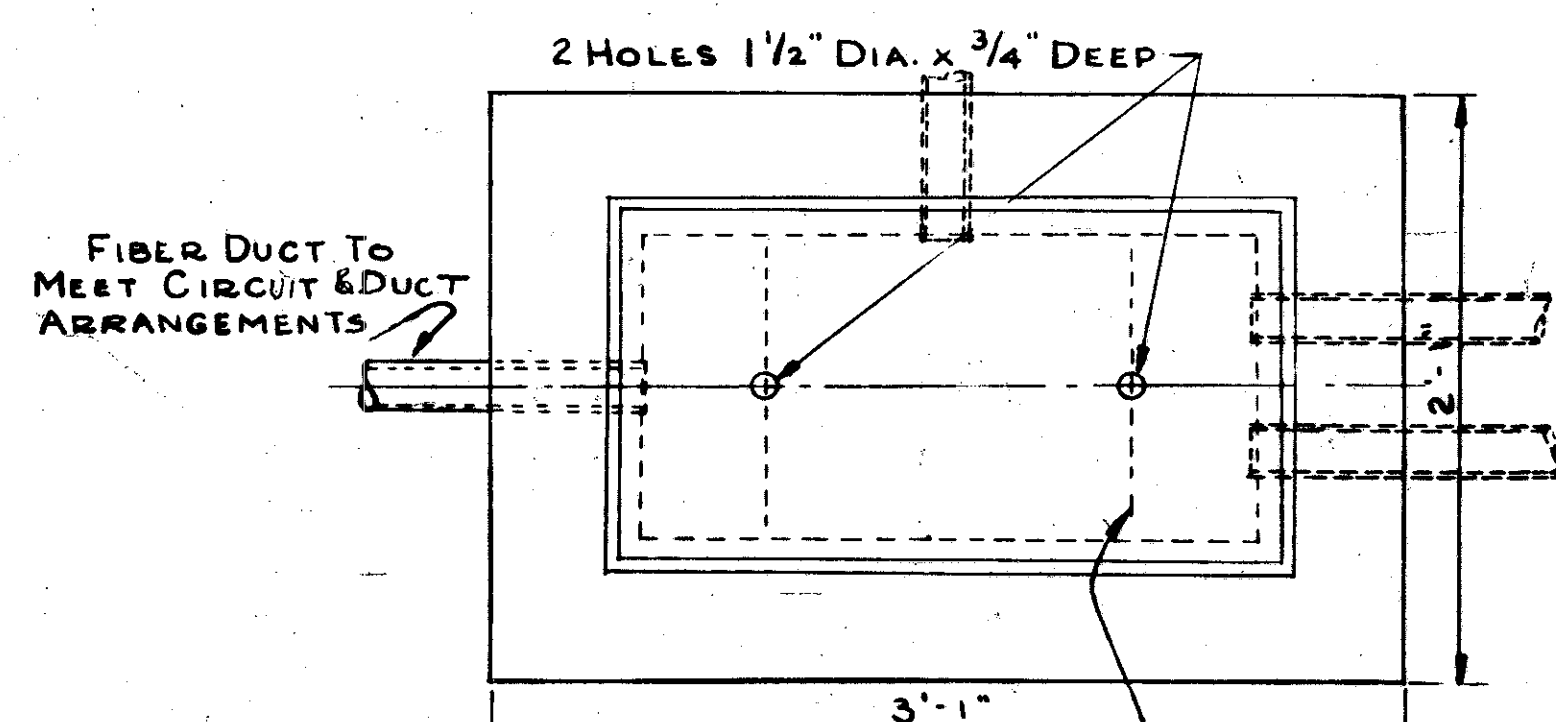
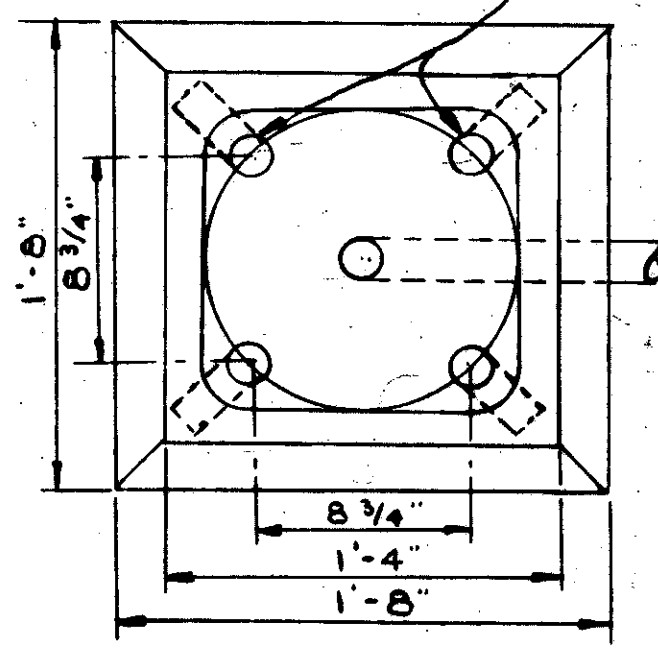
STA. 26+61.130 (1B) AHEAD  
 = STA. 27+09.873 (1B) BACK  
 = MATCH LINE THIS SHEET

PAVEMENT CROSSOVERS			
ITEM	LOCATION	TYPE	LENGTH
1-L	FREEWAY, STA. 35+46	2-2" DUCT	135 FT.
2-L	RAMP #10, STA. 2+45	2-2" & 2-4" DUCT	28 "
3-L	RAMP #11, STA. 2+58	2-2" DUCT	40 "
4-L	RAMP #10, STA. 1+30	2-2" DUCT	36 "
5-L	RAMP #10, STA. 6+00	2-2" DUCT	34 "
6-L	FREEWAY, STA. 25+05	2-2" DUCT	110 "
7-L	RAMP #10, STA. 1+60	2-2" & 2-4" DUCT	40 "

CUY-42-19.28  
CUYAHOGA COUNTY  
CUY-322-(1.08-1.39)

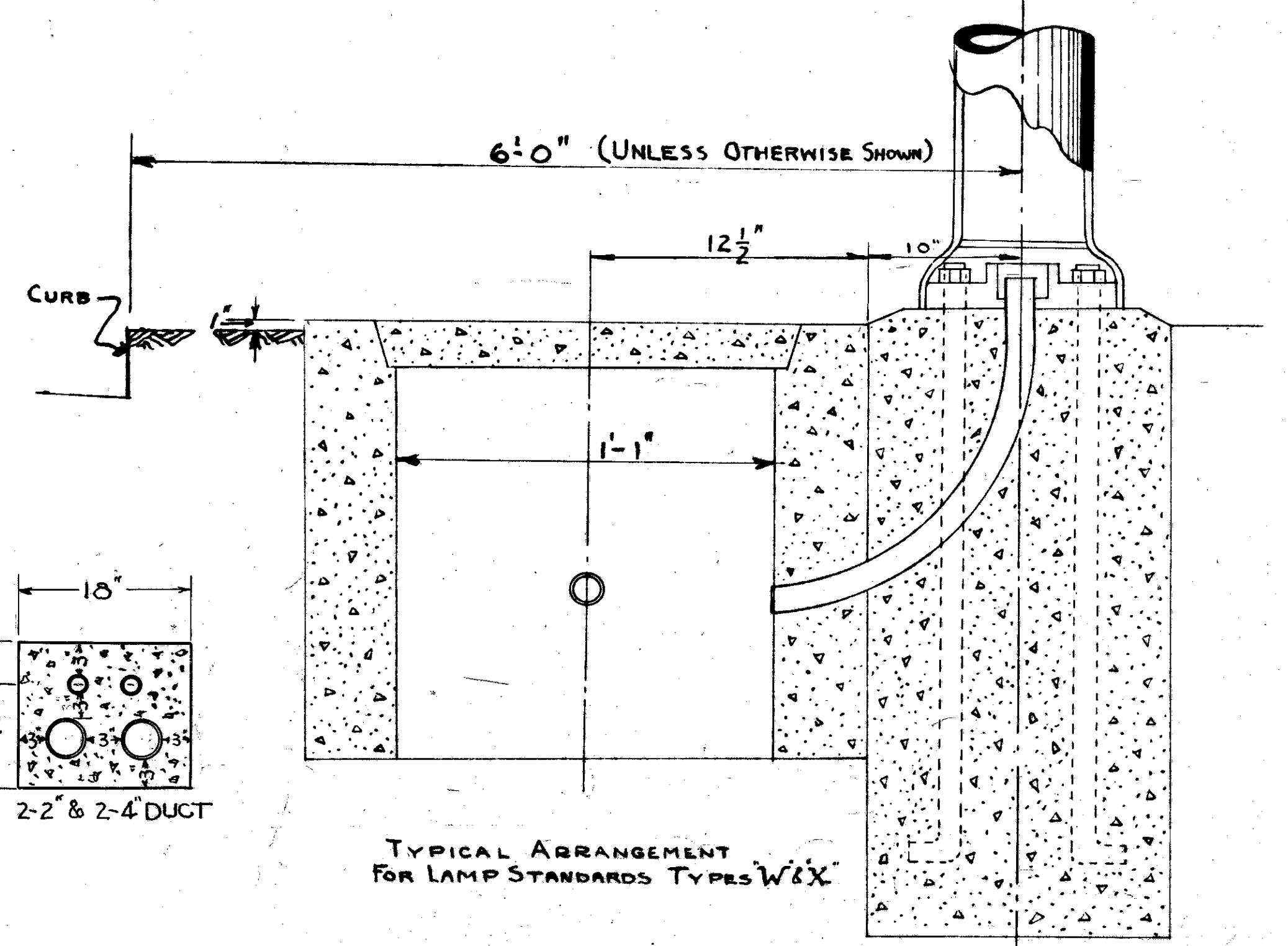
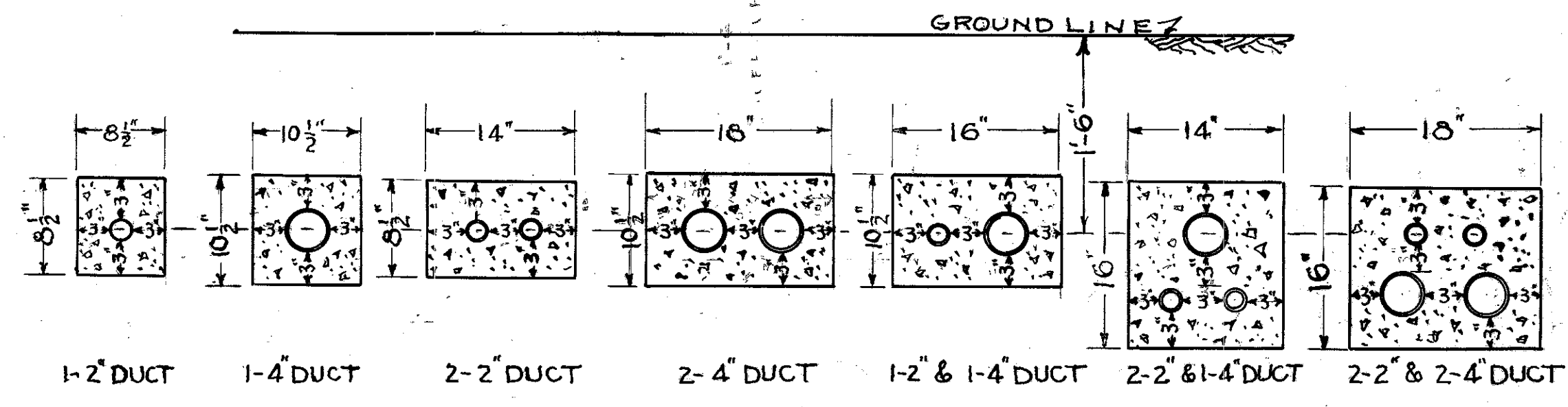
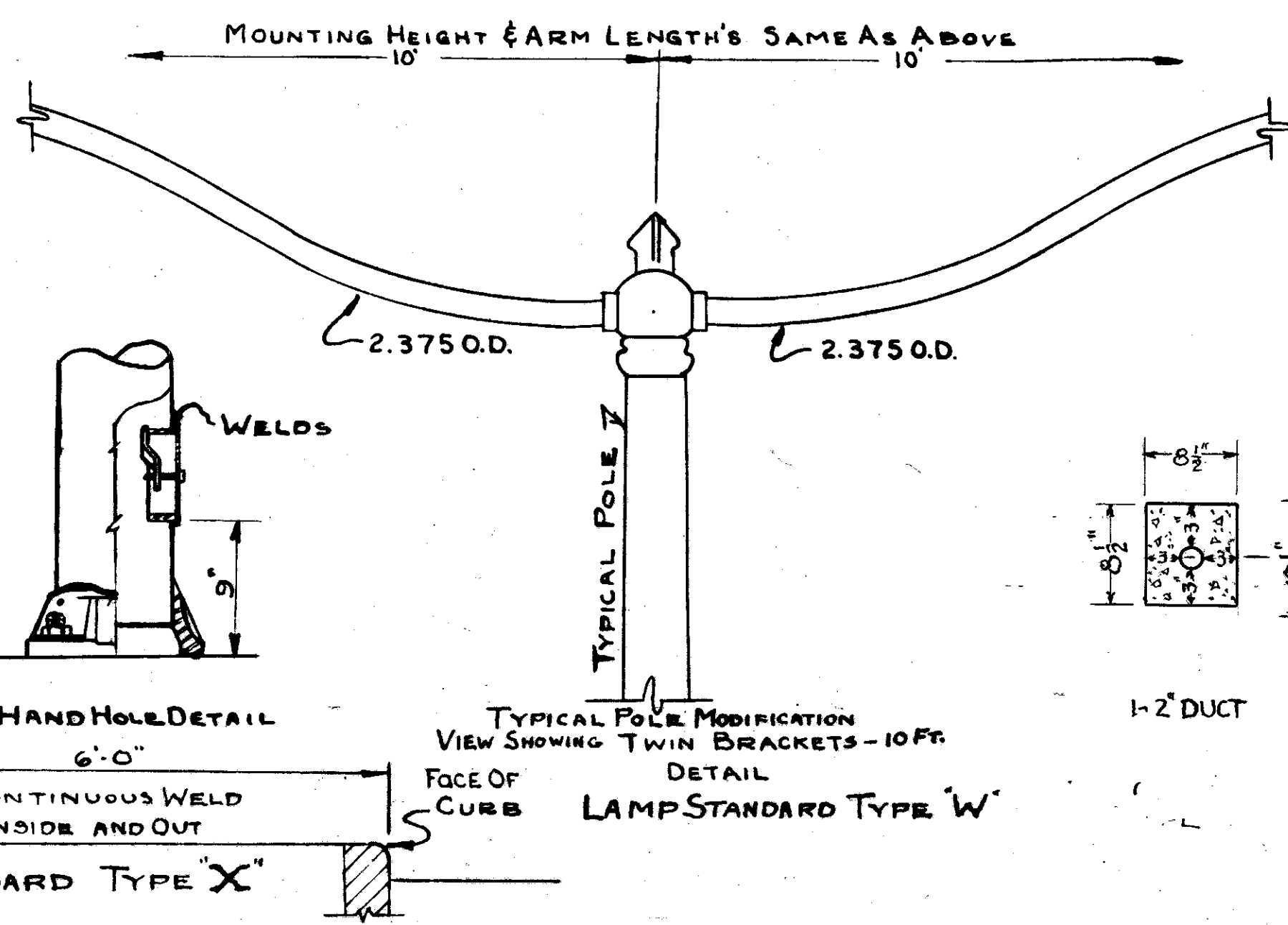
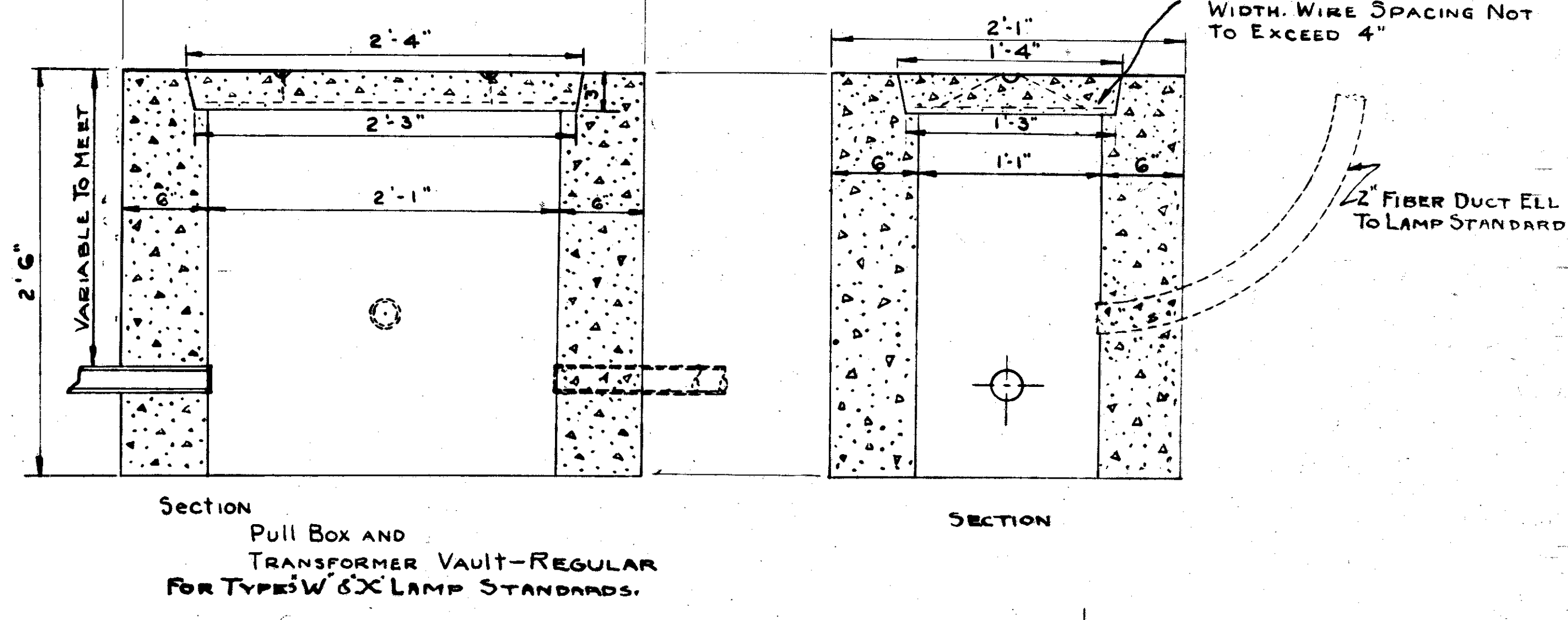
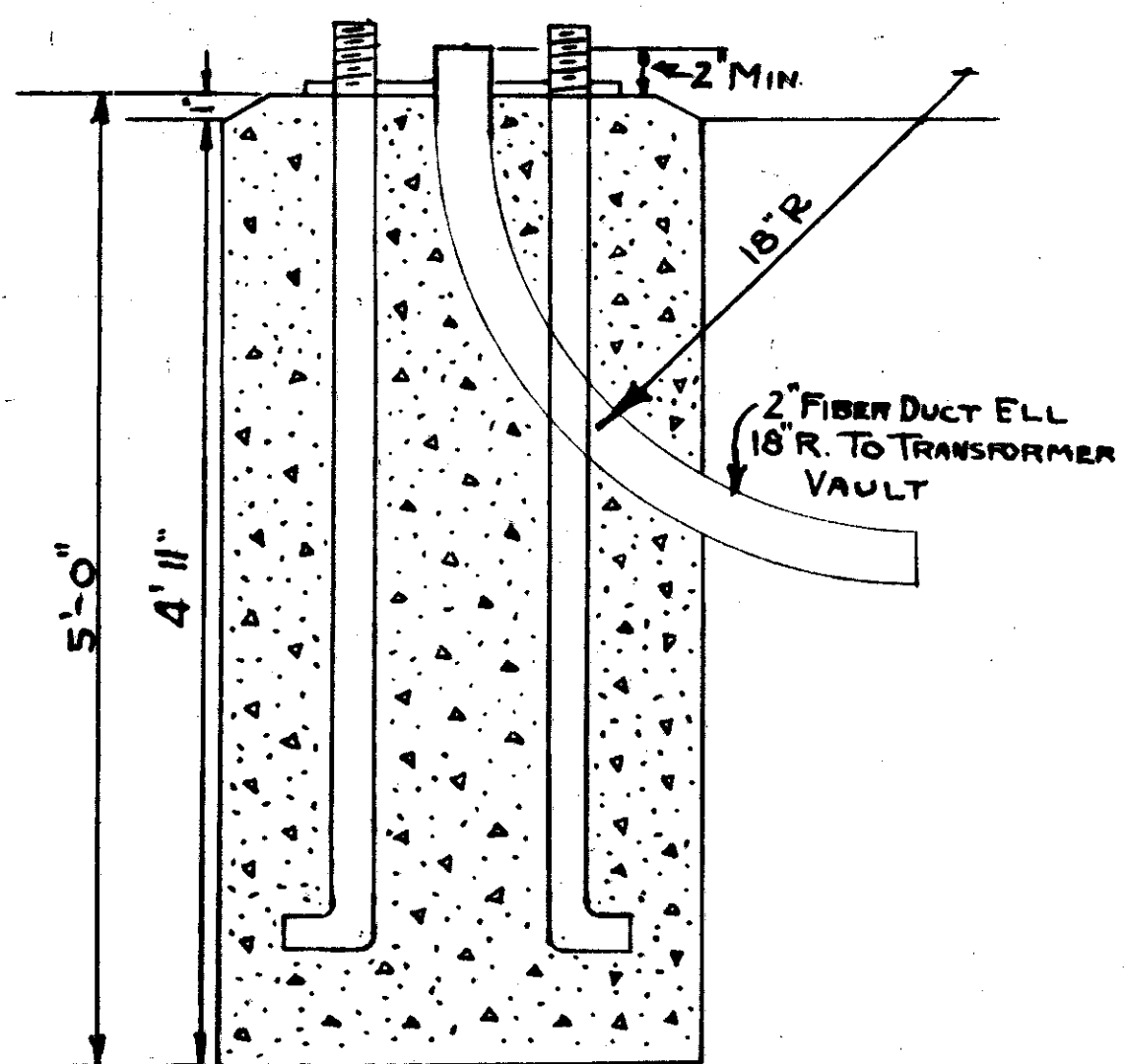
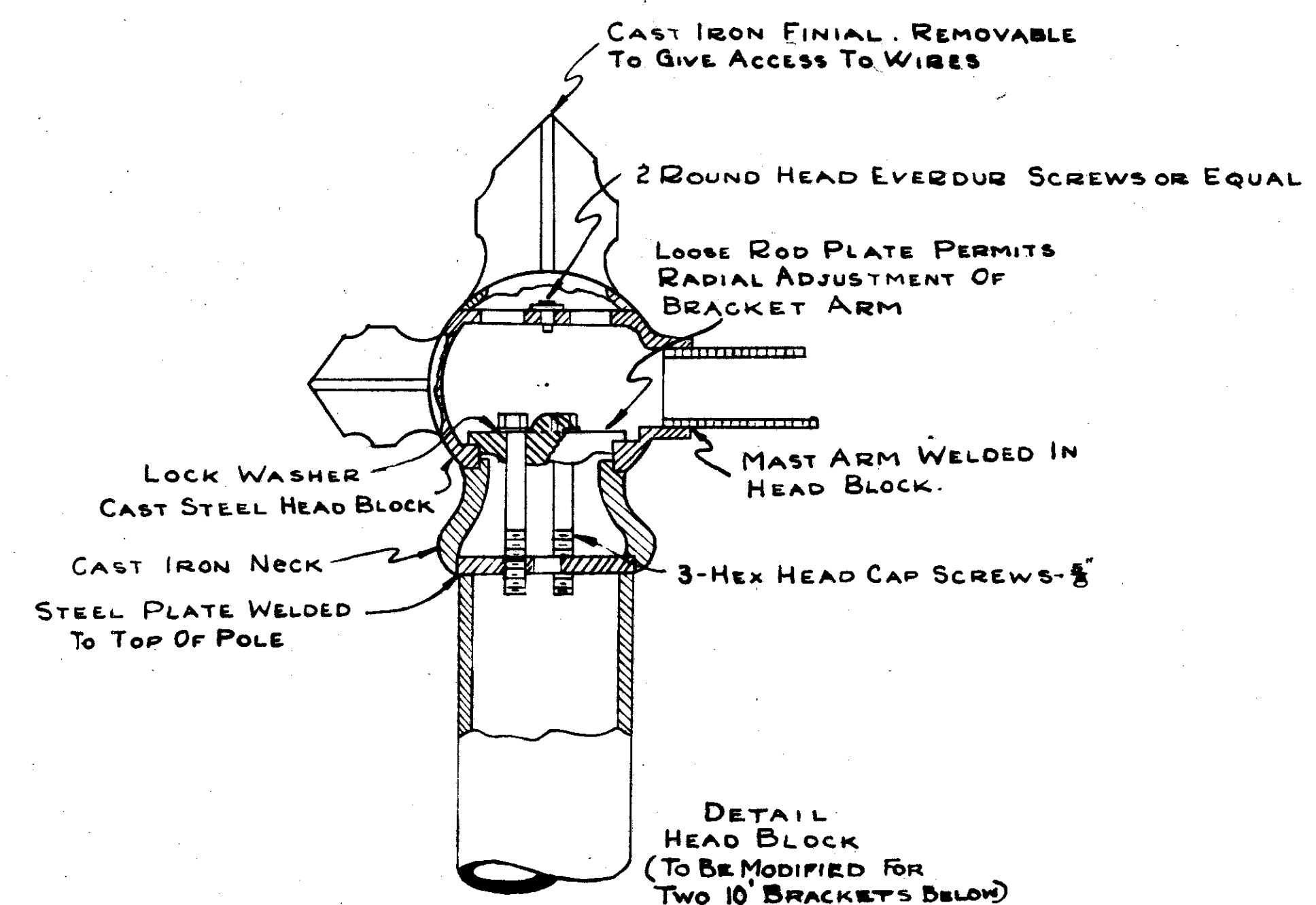


4-1/4" ANCHOR RODS 60" OVERALL LENGTH ON 12 1/2" BOLT CIRCLE. RODS MUST PROJECT 3 1/4" ABOVE BASE.

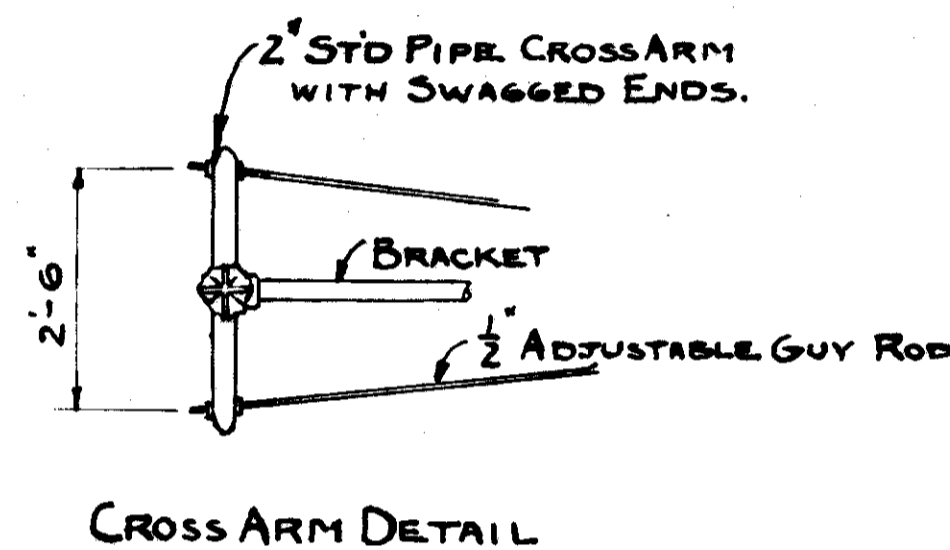
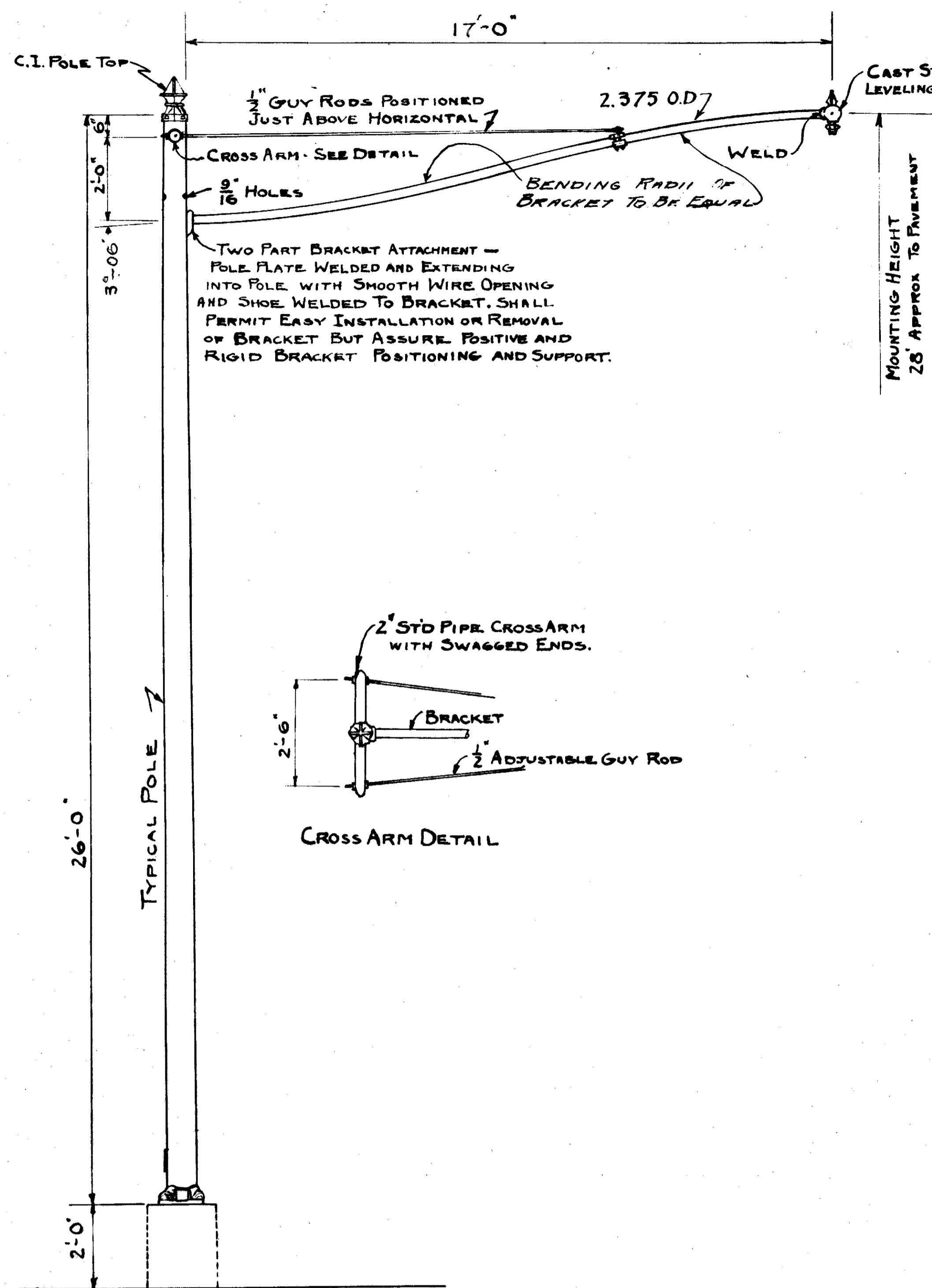


NOTE: DIMENSIONS SHOWN ARE FOR TOP OPENING. COVER TO BE APPROX. 1/2" LESS.

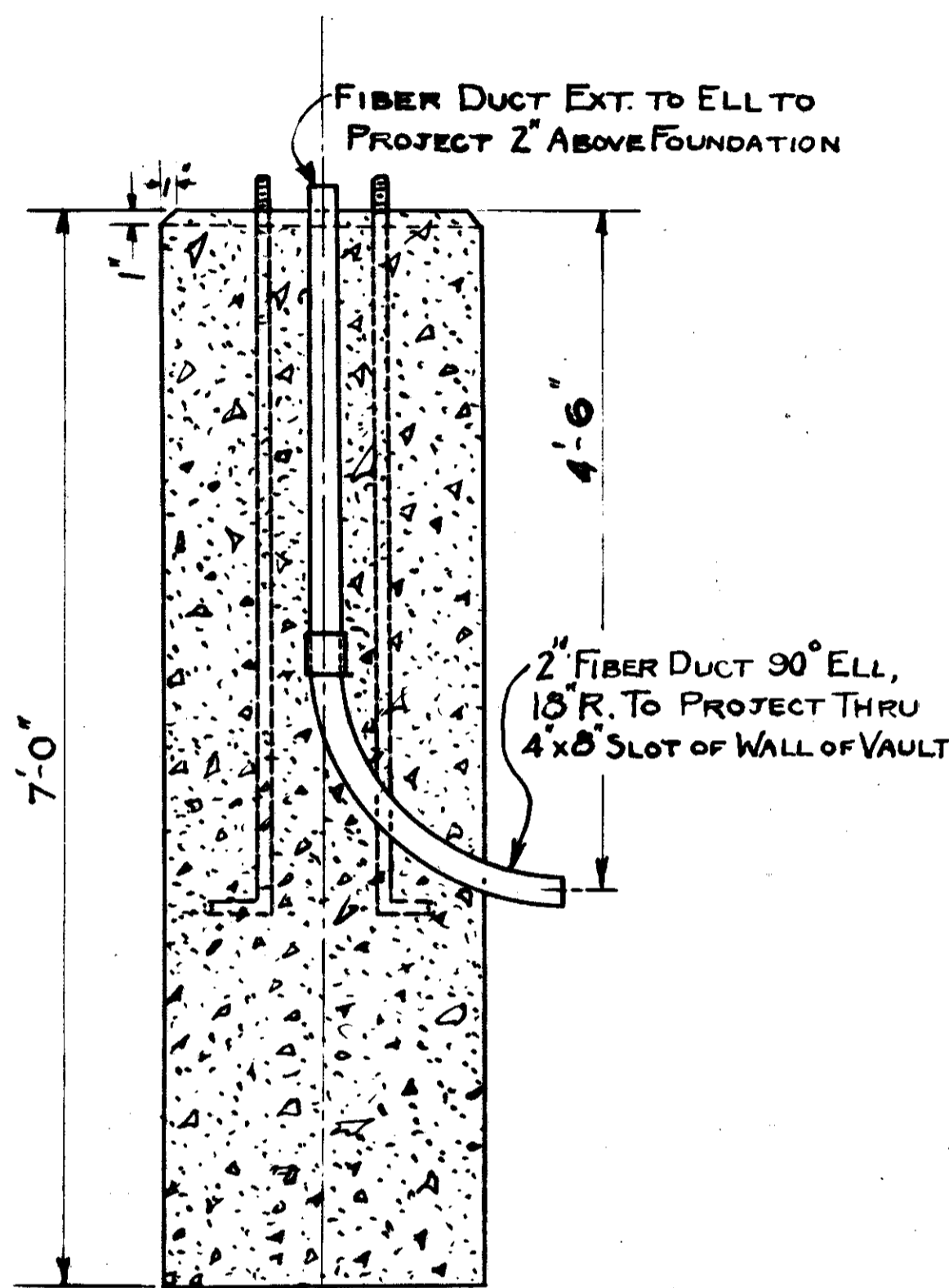
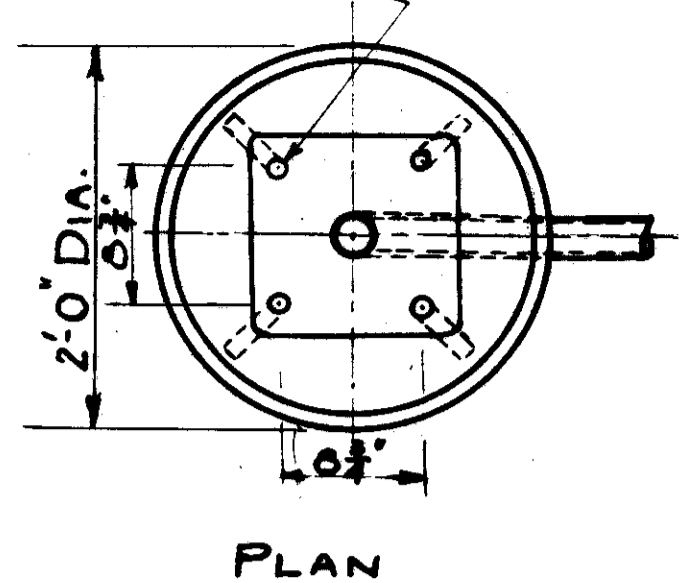
ROUND MONOTUBE POLE 9 X 5.36 X 26'-0" LONG (ALUMINUM OR STEEL)



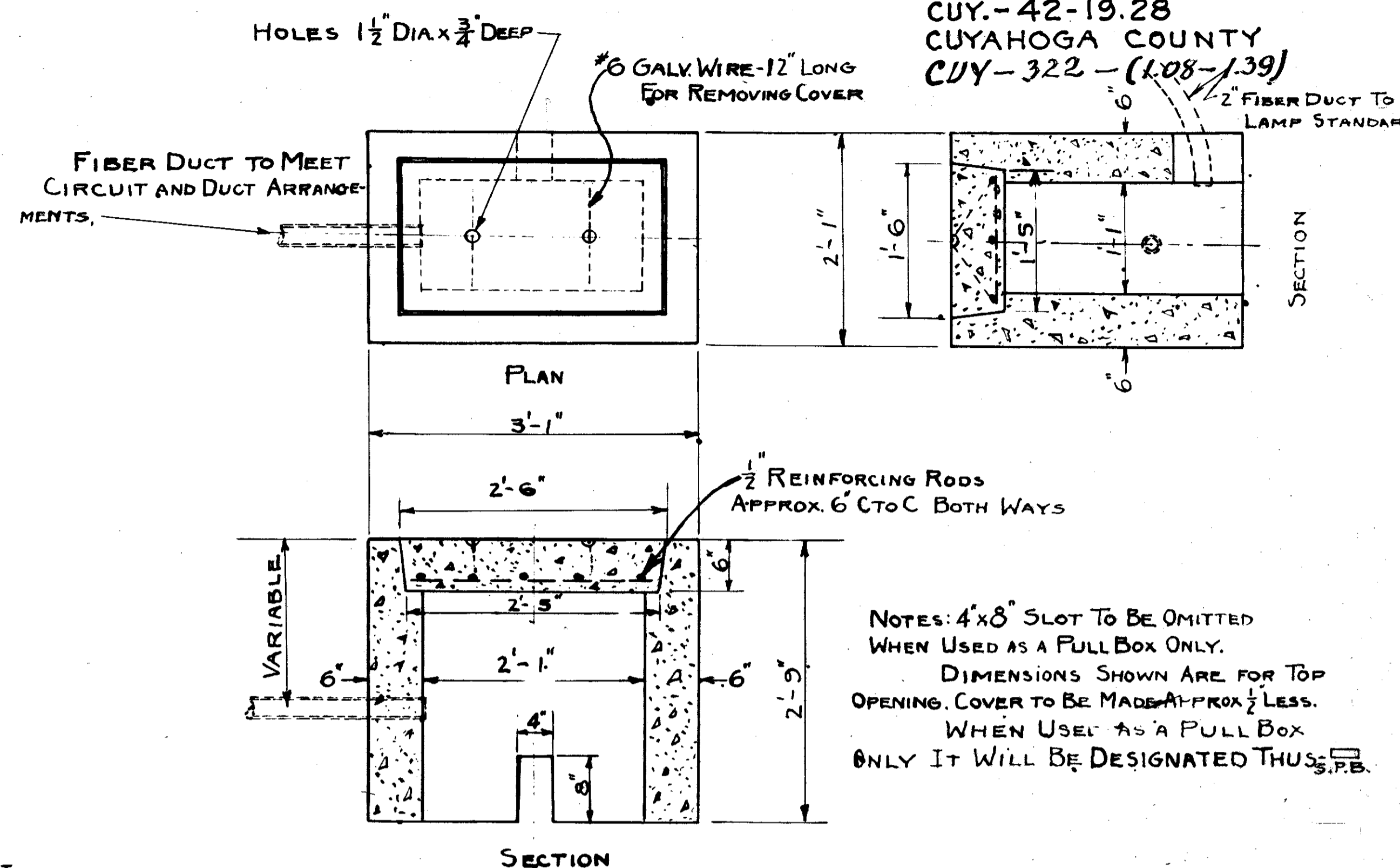
CUY.-42-19.28  
CUYAHOGA COUNTY  
CUY-322-(1.08-1.39)



4-1/2" ANCHOR BOLTS 60" OVERALL LENGTH ON 12 1/2" BOLT CIRCLE. RODS MUST PROJECT 3 1/8" ABOVE FOUNDATION.



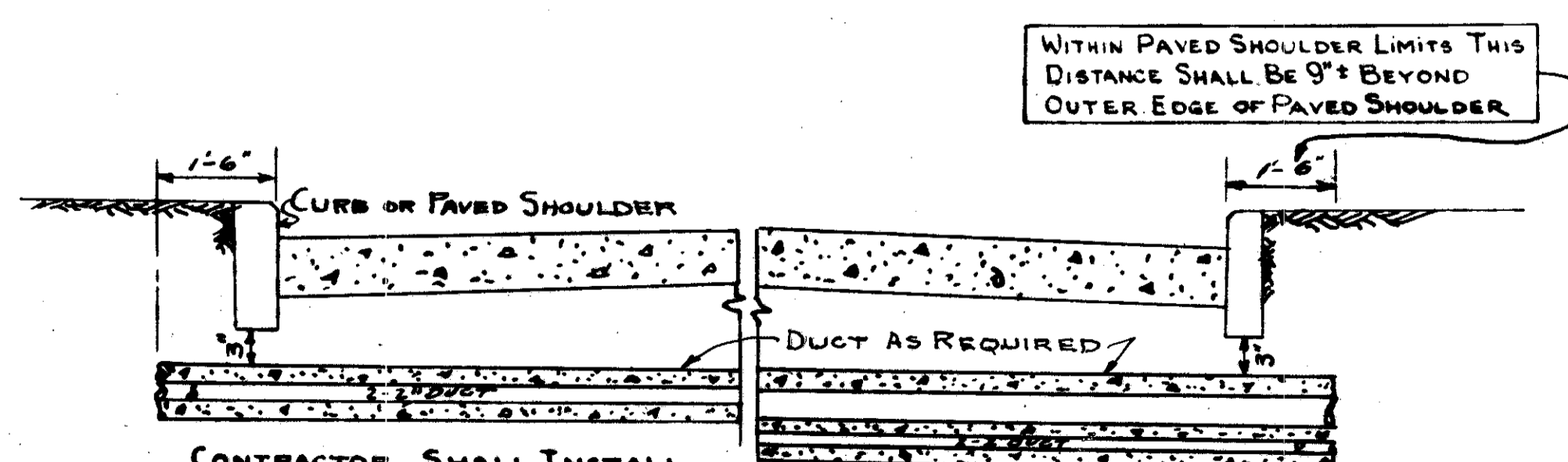
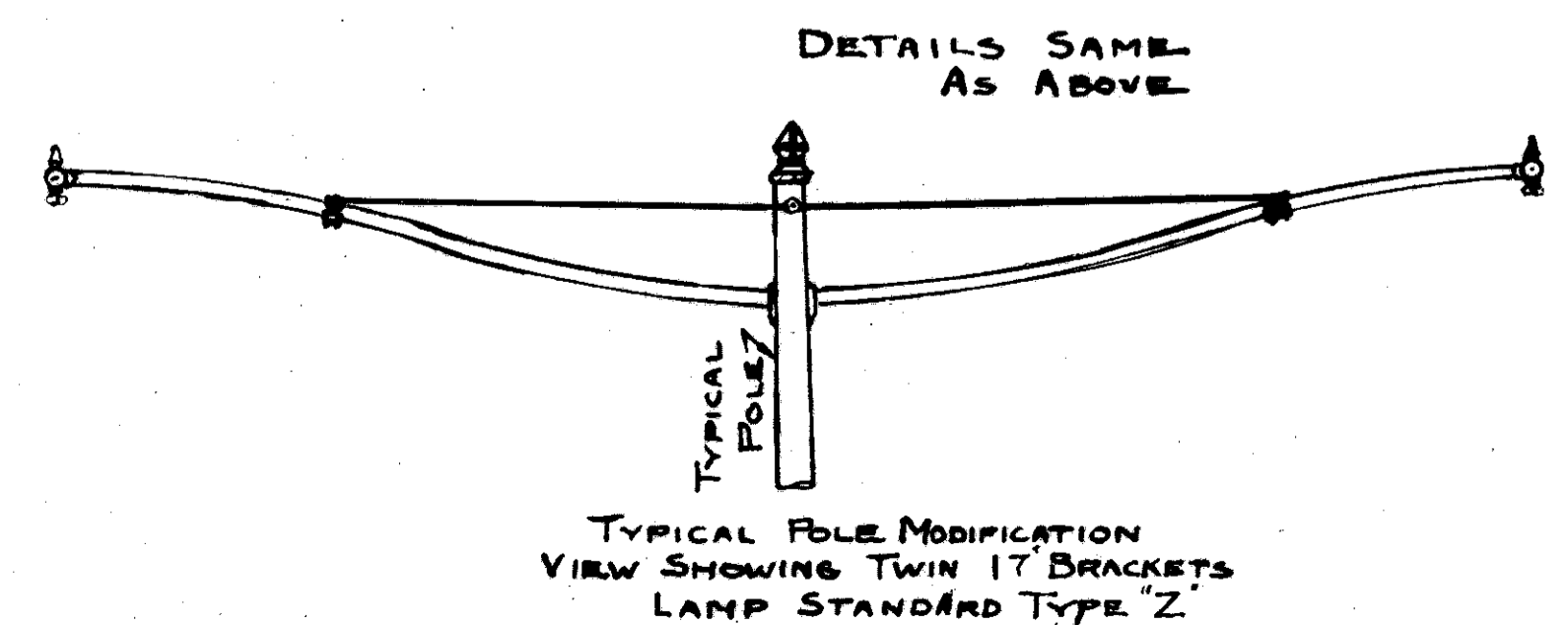
LAMP STANDARD FOUNDATION-SPECIAL FOR TYPE Y & Z LAMP STANDARDS. TO BE CAST IN PLACE.



PRECAST PULL BOX AND TRANSFORMER VAULT-SPECIAL FOR LAMP STANDARDS TYPE Y & Z

NOTES: 4'x8' SLOT TO BE OMITTED WHEN USED AS A FULL BOX ONLY. DIMENSIONS SHOWN ARE FOR TOP OPENING. COVER TO BE MADE APPROX 1/2" LESS. WHEN USED AS A FULL BOX ONLY IT WILL BE DESIGNATED THUS: S.P.B.

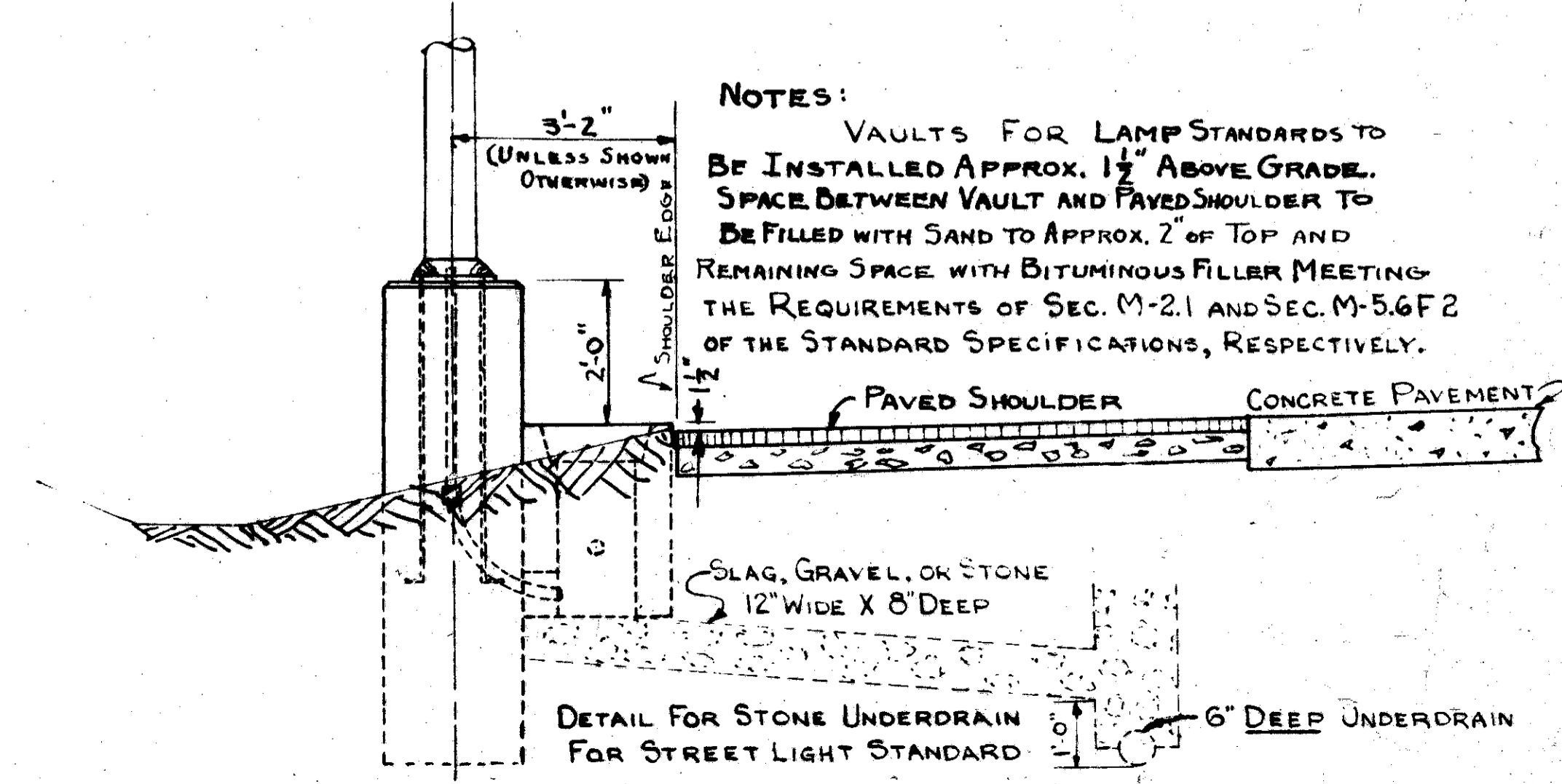
TYPICAL POLE MODIFICATION VIEW SHOWING ONE 17' BRACKET LAMP STANDARD TYPE Y



CONTRACTOR SHALL INSTALL STREET LIGHTING CROSSOVERS AS SHOWN ON STREET LIGHTING PLANS BEFORE PLACING CONCRETE PAVEMENT.

STREET LIGHTING CROSSOVER

TYPICAL ARRANGEMENT LAMP STANDARDS 'Y' & 'Z'



NOTES: VAULTS FOR LAMP STANDARDS TO BE INSTALLED APPROX. 1 1/2" ABOVE GRADE. SPACE BETWEEN VAULT AND PAVED SHOULDER TO BE FILLED WITH SAND TO APPROX. 2" OF TOP AND REMAINING SPACE WITH BITUMINOUS FILLER MEETING THE REQUIREMENTS OF SEC. M-2.1 AND SEC. M-5.6F2 OF THE STANDARD SPECIFICATIONS, RESPECTIVELY.

STREET LIGHTING

# SPECIFICATIONS FOR ORNAMENTAL PENDANT LIGHTING STANDARD

## TYPICAL STEEL POLE TYPE X

## TYPICAL ALUMINUM POLE TYPE X

**GENERAL**

Ornamental standards shall conform to the specifications and the plans, as to general design and finish, height, base, mast arm and dimensions. In general, the standards shall consist of a cast steel anchor base to which shall be welded a tapered steel pole. To the steel pole shall be fastened an ornamental pole top to which shall be welded a mast arm for supporting the lighting unit.

**ANCHOR BASE**

A cast steel anchor base of adequate strength and of the shape and size shown on the drawing shall be secured to the lower end of the shaft by means of a double electric weld. To obtain this construction, the base shall telescope the shaft and one weld shall be on the inside of the base at the end of the shaft and the other shall be on the outside at the top of the base. The base shall be provided with four holes to receive the anchor rods and also four holes for ventilation and with four cast iron ornamental anchor bolt cover leaves with cap screws for attaching the leaves to the base.

**ANCHOR RODS**

Four anchor rods of 1 1/4 inches in diameter and an overall length of 60 inches shall be furnished with each standard. The anchor rods shall be threaded at the top and fitted with a hexagonal nut. The bottom of the anchor rods when embedded in a concrete foundation shall have an "L" bend. The threaded end of all anchor rods and all nuts shall be galvanized as per Sec. M-74(d) or cadmium plated in accordance with the best practice.

**SHIMS**

A set of "U" shaped shims of proper dimensions to fit around 1/4 inch diameter anchor rods shall be furnished with each pole for use in the proper alignment of the pole. These shims shall be galvanized or cadmium plated.

**SHAFT**

The steel shaft of the lighting standard shall be fabricated from not less than #11 manufacturers standard gauge, best grade, hot rolled, basic open hearth steel conforming to ASTM specification serial designation A283-46T Grade A. The shaft shall be formed and welded with only one longitudinal, automatically electrically welded joint and shall have no horizontal joints or welds. The weld shall be of full penetration. After forming and welding, the tapered shaft shall be cold rolled or worked under sufficient pressure to flatten out the weld, to increase the elastic limit of the metal in the completed shaft, and to produce a true tapered tube without flat spots and a circular cross-section throughout the length of the shaft. If the shaft is fabricated by means of a brake or other process which does not utilize the cold rolling principle, it shall be fabricated from a steel sheet having a thickness of #7 manufacturers standard gauge.

**POLE TOP AND BRACKET**

Each standard shall have a mast or bracket arm 10 feet in length, made of standard pipe of the size shown on the plans. The inner end of the brackets shall be welded to a cast steel head block so designed, that the arm can be bolted through a cast iron neck piece to a plate welded to the top of the pole to permit radial adjustment of the bracket arm. Provisions shall be made to permit passage of and access to concealed wires to bracket arm. The ornamental casting welded to the outer end of the bracket shall be arranged with a leveling device or "plumbizer" for adjustment of a pendant lighting fixture and shall be tapped for 1/2 inch pipe connection. The "plumbizer" shall be a separate assembly. Leveling devices which are built-in as an integral part of the bracket will not be accepted.

**VENTILATION HOLES AND INLET**

Each standard shall have two 3/8 inch holes.

**FINISH**

The standard shall be thoroughly cleaned and given one shop coat of high grade red lead or zinc chromate primer followed by one coat of high grade weather resistant green enamel (M- 9.23) to be applied by the contractor after erection.

**DUCT**

Fiber conduit shall be used in the duct line. Such fiber conduit shall be made of wood pulp fiber thoroughly saturated with black insulating compound. The walls shall be compact and incapable of separation into layers when heated to 212 degrees Fahrenheit. The finished conduit shall not be affected by moisture or acids present in the soil or in concrete and shall be free from any substance which might corrode the lead cable sheath. The inner surface shall be free from considerable excess of compound and from flaky areas. The walls of the conduit shall not be less than 0.21 inches thick for 2" conduit and the cross section shall not vary at any point more than 3/8 inch from a true circle. The inner surface shall be free from dents or other obstructions. Fiber conduit shall be furnished in standard lengths. The type of joint used shall be Harrington, tapered sleeve type, or approved equal. The contact surfaces of the fiber duct and couplings shall be accurately machined to insure tight joints.

**CONCRETE**

Concrete for duct lines, lamp standard foundations and pull boxes shall be Class "C" concrete using #4 aggregate except where otherwise shown.

**GENERAL**

Ornamental standard shall conform to the specifications and the plans, as to general design and finish, height, base, mast arm and dimensions. In general the standard shall consist of a cast aluminum base to which shall be welded a tapered aluminum pole. To the aluminum pole shall be fastened an ornamental pole top to which shall be fastened a mast arm for supporting the light unit.

**ANCHOR BASE**

A cast aluminum anchor base of adequate strength and of the shape and size shown on the drawing shall be secured to the lower end of the shaft by means of a double electric weld. To obtain this construction, the base shall telescope the shaft and one weld shall be on the inside of the base at the end of the shaft and the other shall be on the outside at top of the base. The base shall be provided with four holes to receive the anchor rods and also four holes for ventilation and with four cast aluminum ornamental anchor bolt cover leaves with aluminum cap screws for attaching the leaves to the base.

All castings shall conform to ASTM Specification B26-48TS1-F (Alcoa alloy No. 43).

**ANCHOR RODS**

Four anchor rods of 1 1/4 inches in diameter and an overall length of 60 inches shall be furnished with each standard. The anchor rods shall be threaded at the top and fitted with a hexagonal nut. The bottom of the anchor rods when embedded in a concrete foundation shall have an "L" bend. The threaded end of all anchor rods and all nuts shall be galvanized as per Sec. M-74(d) or cadmium plated in accordance with the best practice.

**SHIMS**

A set of "U" shaped shims of proper dimensions to fit around 1/4 inch diameter anchor rods shall be furnished with each pole for use in the proper alignment of the pole. The shims shall be galvanized or cadmium plated.

**SHAFT**

The aluminum shaft for the lighting standard shall be fabricated from an aluminum alloy conforming to ASTM specification B209-48T G21 (Alcoa 525). The pole shall have the same strength as a similar pole fabricated from No. 11 gauge, hot rolled, basic open hearth steel conforming to ASTM specification serial designation A283-46T Grade A. The shaft shall be formed and welded with only one longitudinal, automatically electrically welded joint and shall have no horizontal joints or welds. The weld shall be of full penetration. After forming and welding, the tapered shaft shall be cold rolled or worked under sufficient pressure to flatten out the weld, to increase the elastic limit of the metal in the completed shaft, and to produce a true tapered tube without flat spots and a circular cross section throughout the length of the shaft.

If the aluminum shaft for the lighting standard is fabricated by spinning an extruded tube it shall be fabricated from an alloy conforming to ASTM specification B235-48T (Alcoa 635 or 615).

All aluminum nuts, bolts, and washers shall be of Alcoa alloy 24S-T4 with Alumilite Finish No. 204, or approved equal. Stainless steel nuts, bolts, & washers may also be used.

**POLE TOP AND BRACKET**

Each standard shall have a mast arm or bracket arm 10 feet long as shown on plans, made of standard aluminum pipe of aluminum alloy conforming to ASTM specification B235-48T G52 (Alcoa 635). Provisions shall be made to permit passage of and access to concealed wires to bracket arm. The ornamental casting welded to the outer end of the bracket shall be arranged with a leveling device or "plumbizer" for adjustment of a pendant lighting fixture and shall be tapped for 1/2 inch pipe connection. The "plumbizer" shall be a separate assembly. Leveling devices which are built-in as an integral part of the bracket will not be accepted. The quality of the aluminum pipe used for the bracket shall have the same strength as specified for the steel bracket.

**VENTILATION HOLES AND INLET**

Each standard shall have two 3/8 inch holes provided together with a wire inlet as indicated on the plans.

**FINISH**

The standard shall be thoroughly cleaned and no painting is required.

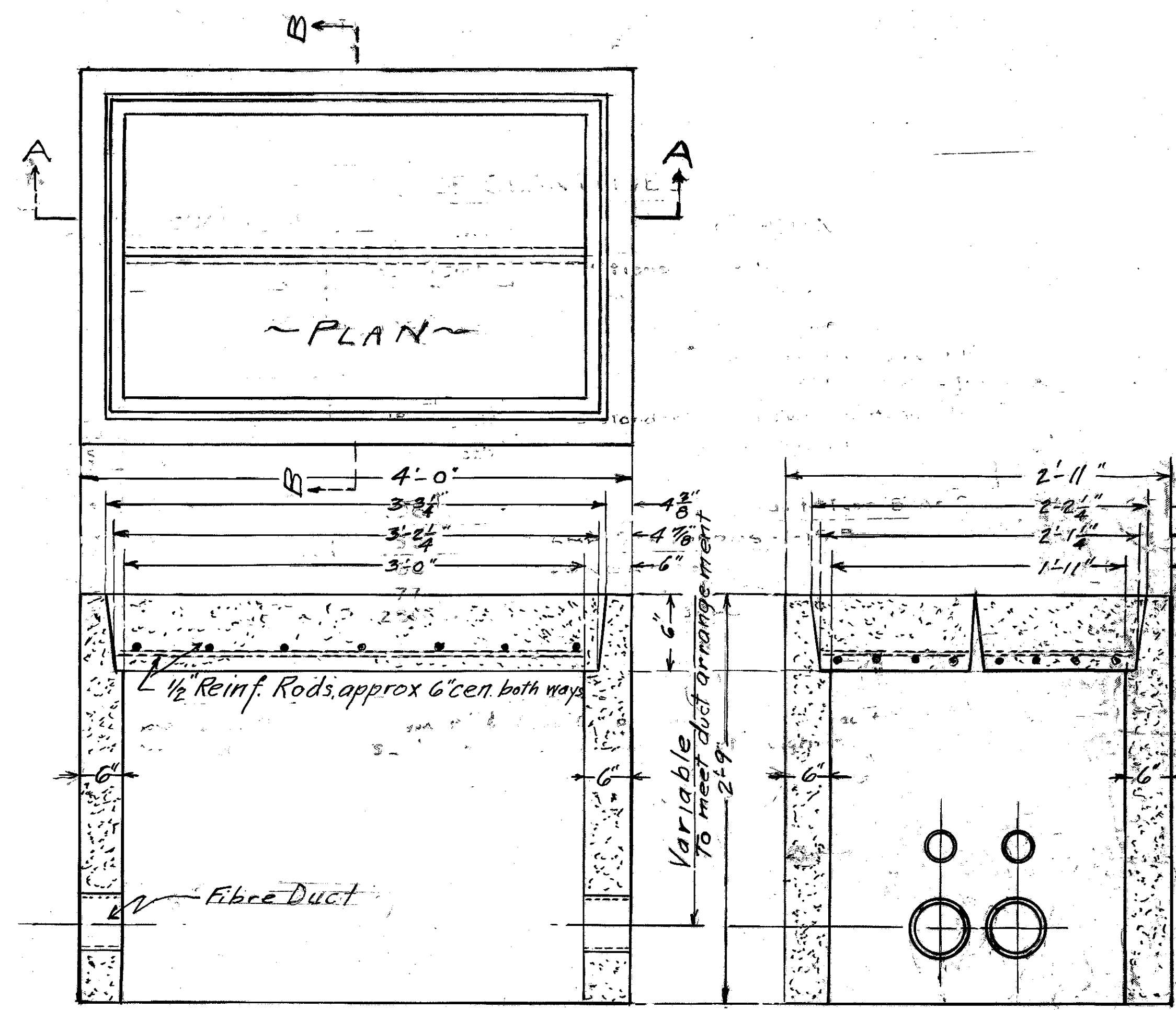
**ADDITIONAL STANDARD SPECIFICATIONS.**

TYPE W, Y AND Z LAMP STANDARDS SHALL COMPLY IN EVERY RESPECT TO THE PROVISIONS HEREIN SET FORTH FOR THE TYPICAL POLE AND TYPE X LAMP STANDARD WITH FOLLOWING EXCEPTIONS:

FOR TYPE W LAMP STANDARDS, THE HEAD BLOCK SHALL BE MODIFIED FOR TWO 10 FOOT BRACKETS.

FOR TYPE Y LAMP STANDARDS, THE HEAD BLOCK SHALL BE OMITTED AND A CAST IRON POLE TOP BE USED WHICH SHALL BE HELD SECURELY IN PLACE WITH SET SCREWS. TYPICAL POLE SHALL BE MODIFIED TO PROVIDE FOR ATTACHING ONE 17 FOOT BRACKET TO SIDE OF POLE IN THE MANNER INDICATED ON PLANS OR OTHERWISE APPROVED.

TYPE Z LAMP STANDARDS SHALL BE THE SAME AS TYPE Y EXCEPT THAT TWO 17 FOOT BRACKETS SHALL BE ATTACHED TO THE POLE.



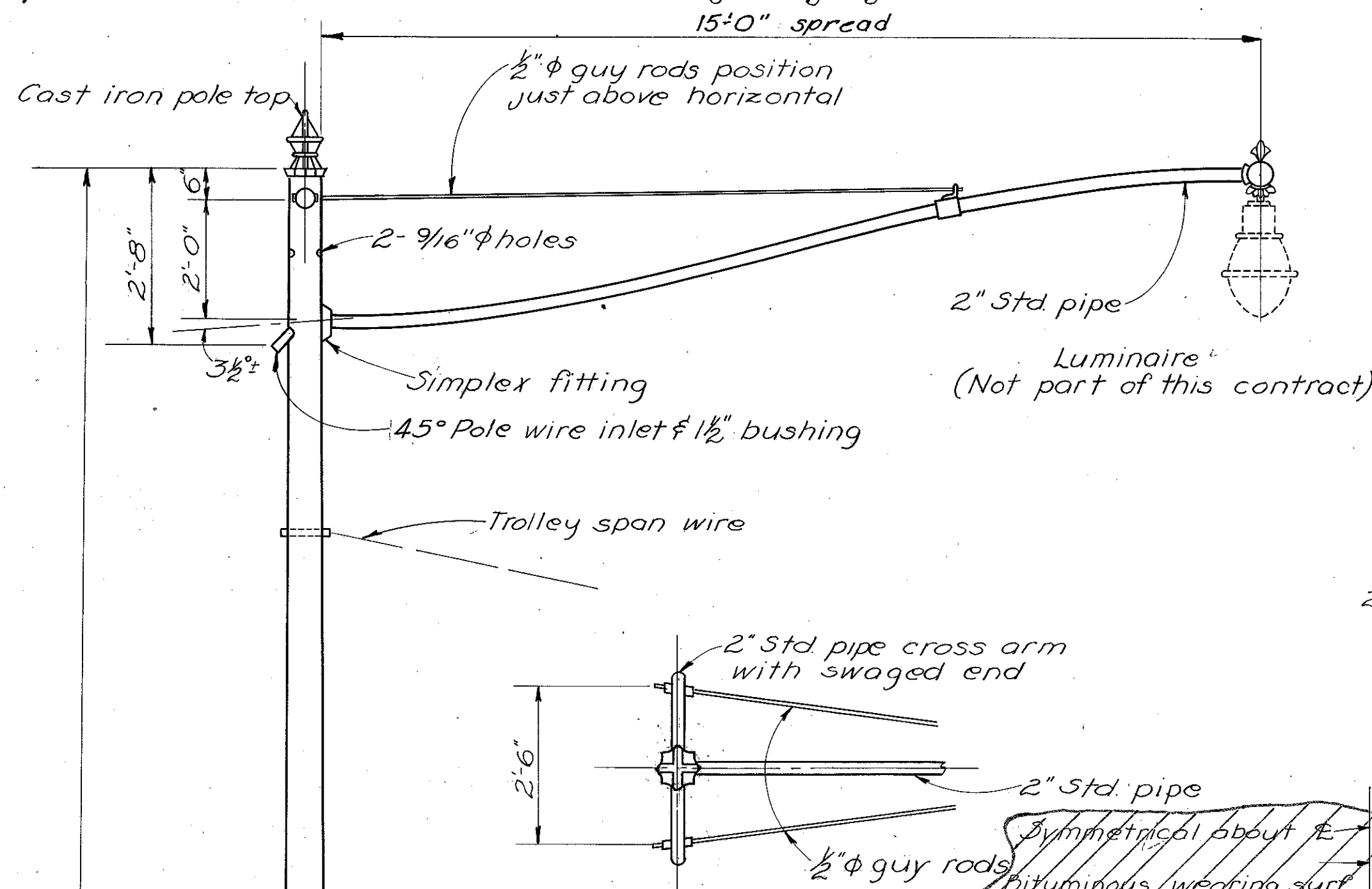
SECTION "A-A"  
SECTION "B-B"  
TYPICAL DOUBLE PULL BOX (1-11" X 3'-0" X 2'-9")

**NOTE:**  
TYPE "Z" Standards are not used in this plan. Any reference made to TYPE "Z" STANDARDS shall be disregarded.

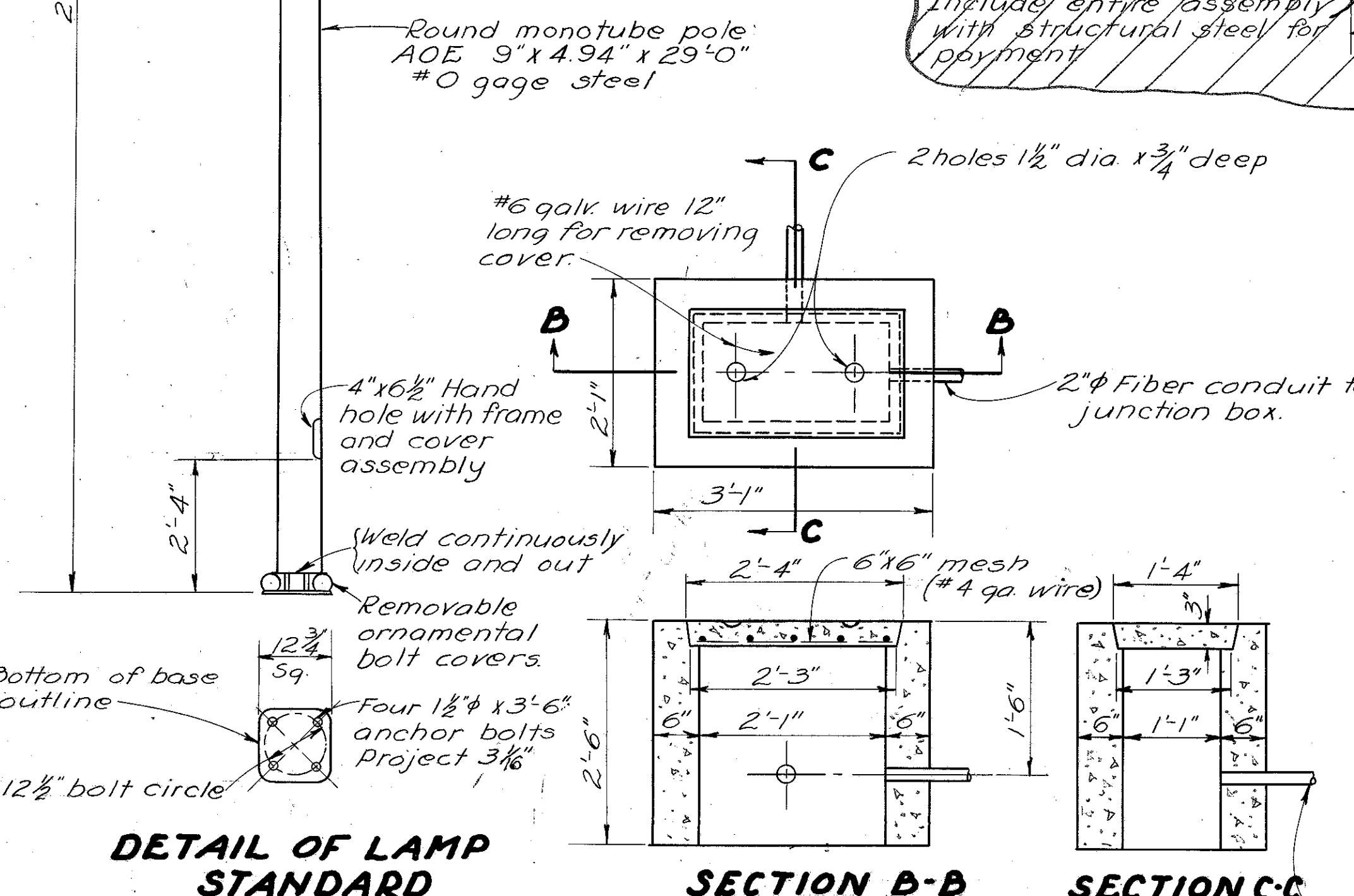
TYPE X STANDARD-UNION METAL DESIGN No. 70161Y23 OR APPROVED EQUAL	" W	" -	" A	" No. 70161Y24	"	"
	" Y	" -	" A	" No. 70468Y5	"	"

**ELECTRICAL GROUNDS**

A solid No.0 bare copper wire electrical ground shall be embedded in the outside concrete column on each side of the structure at the fixed pier. The lower end of the wire shall be brazed to the steel shell of one of the 12" cast-in-place reinforced concrete piles and the upper end shall extend sufficiently above the top of the concrete to provide for a suitable splice and extension for connection to superstructure structural steel. Connection to superstructure shall be a No.0 bare stranded tinned copper wire brazed or bolted to a beam or girder flange and to the solid copper wire in the pier column. All electrical equipment shall be grounded to superstructure beams or girders with No.6 bare copper wire. Payment for electrical grounds is included in the unit price bid for Item S-25, "Electrical lighting system".



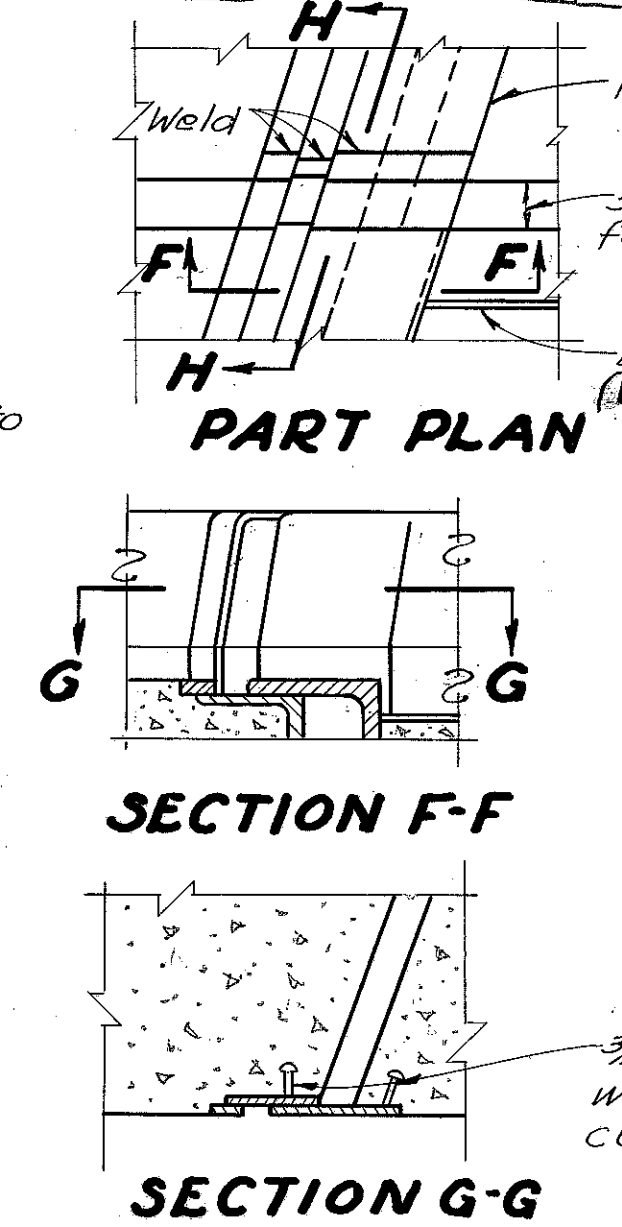
**PART PLAN OF LAMP STANDARD**



**DETAIL OF LAMP STANDARD**

NOTE: This lamp standard shall be used on Superior, Payne and Euclid Ave. For details of lamp standards on other structures see Sheet No.108

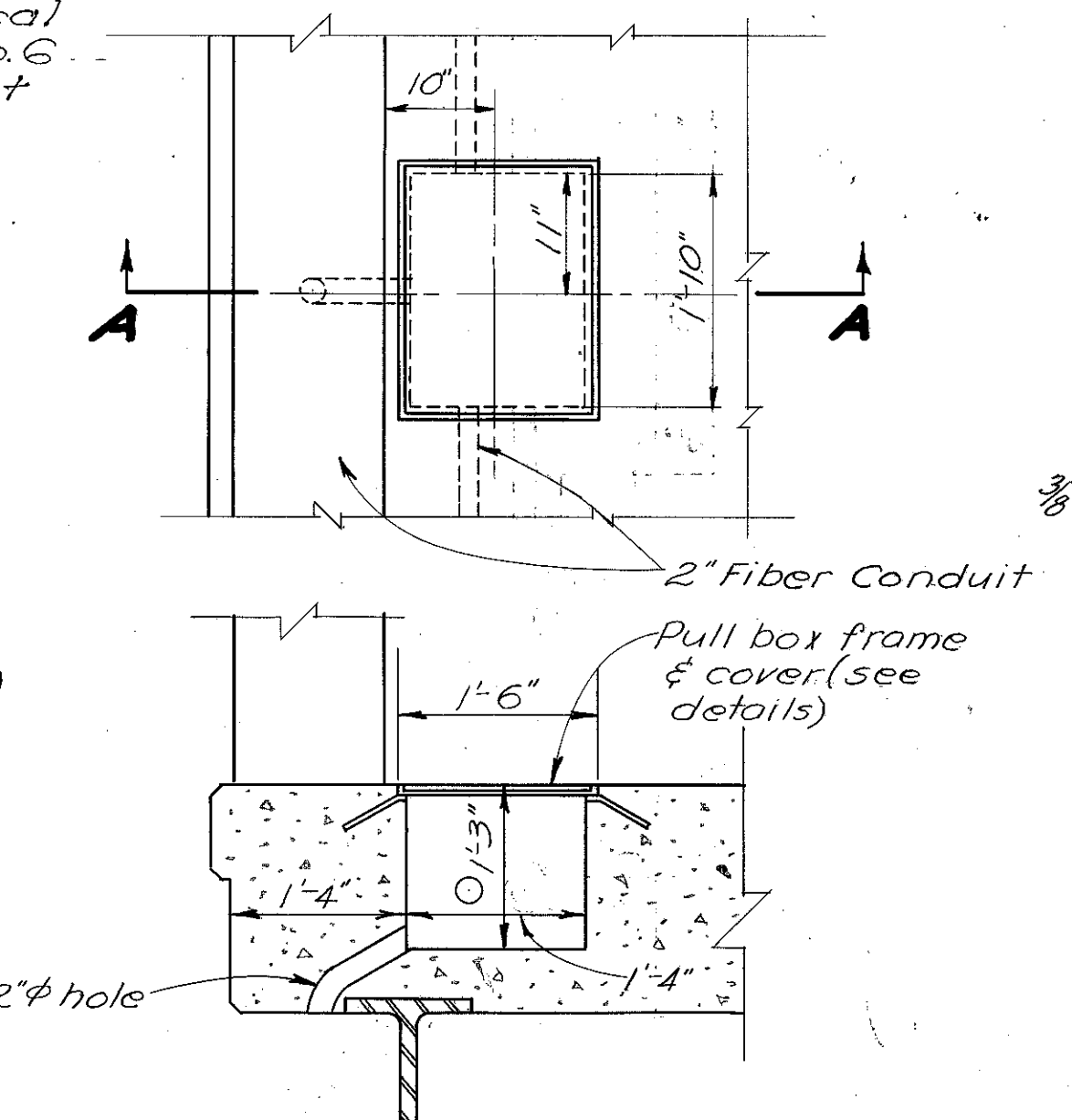
**SECTION B-B  
DETAIL OF PULL BOX &  
TRANSFORMER VAULTS**  
(Precast concrete)



**CURB PLATE DETAILS**

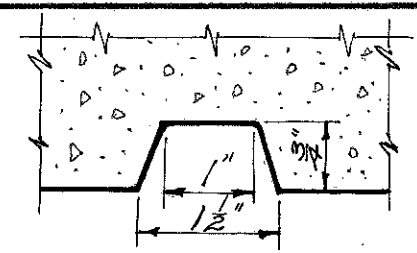
SKREW ANGLE is shown on the project plans but these details are typical of all the Innerbelt structures, except as otherwise shown.

**SECTION A-A  
DETAILS OF PULL BOX &  
TRANSFORMER VAULT  
IN DECK**



**DETAIL OF PULL BOX  
FRAME & COVER**  
(One adjacent to each lamp standard)

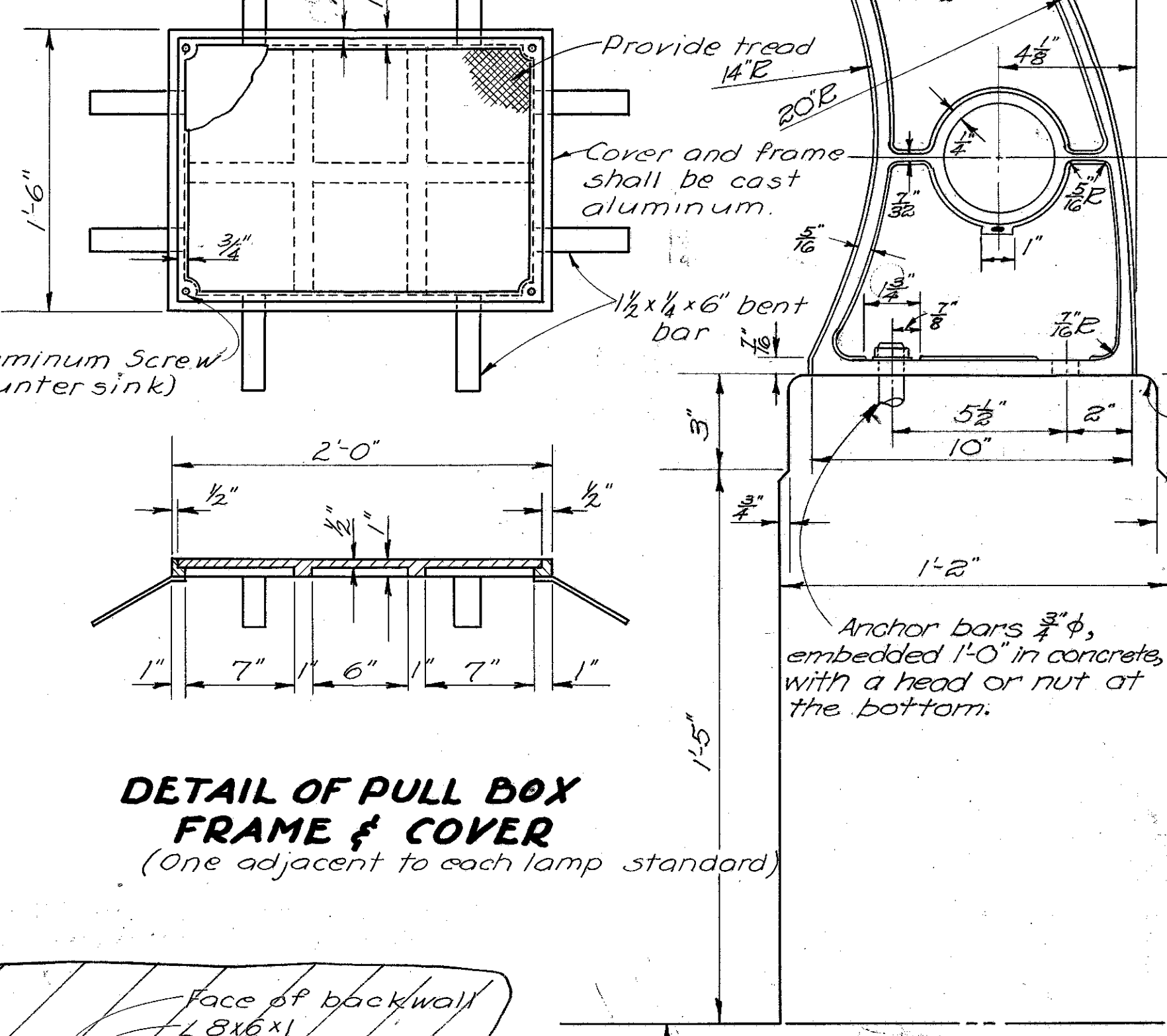
**DETAIL OF  
RUSTICATION GROOVE**



Box details do not apply to Carnegie Ave. Bridge. See Sheet for details.

FED. RD. DIVISION	STATE	PROJECT	39A 124
2	OHIO		

CUYAHOGA COUNTY  
CUY-42R-18.81  
CUY-322-(1.08-1.39)



**ROADWAY END FINISH DETAILS**

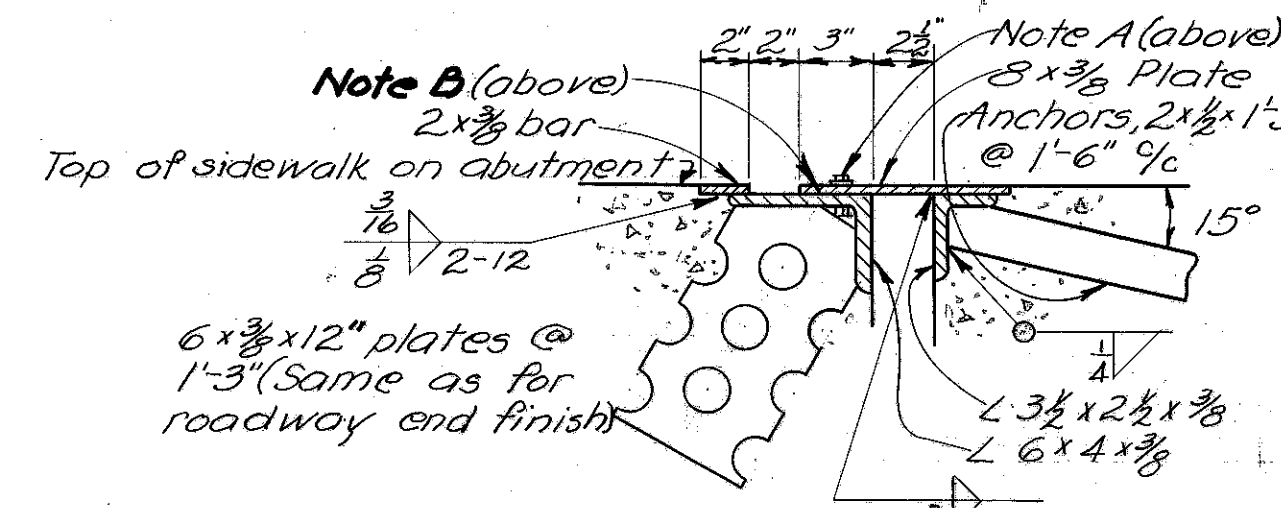
Revised 1-20-58 CPD

Provide a joint in the edge bar and in the angle on the centerline of roadway. Additional joints may be provided in them at a minimum spacing of 6'-0" (Joints shall not be welded.)

NOTE A:  
3/8 x 2" bolts at not more than 2'-0" with nuts & washers welded to under side of lower angle. 1/4" holes in upper angle. Center 3/8" bolts in 1/4" holes. Apply flake graphite between washers and angle. Turn bolt tight and release one-half turn. Remove bolts as soon as concrete has reasonably set, preferably within two hours, to avoid effect of temperature expansion or contraction of superstructure. Fill holes with bituminous material.

NOTE B:  
This contact surface shall not be painted and shall be lubricated with flake graphite prior to placing of backwall concrete. 2 x 1/2 x 1/6" anchor bars @ 12" placed parallel to longitudinal reinforcing.

Omit shop coat on all portions of end finish. Portions in contact with steel or with concrete shall not be painted. All other portions shall be cleaned and given the shop coat in the field as well as the two field coats.



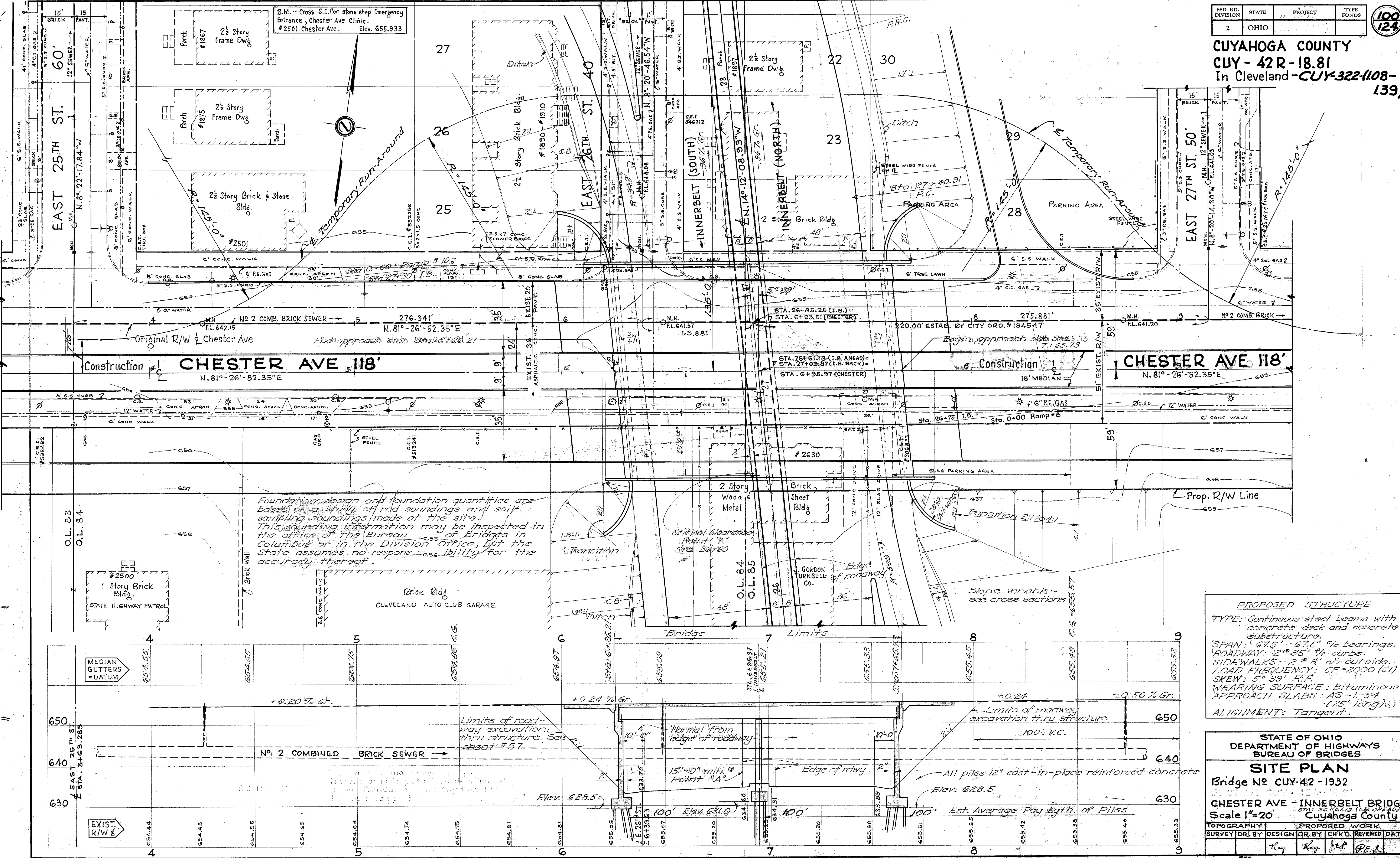
**SIDEWALK END FINISH DETAILS**

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
DIVISION OF DESIGN AND CONSTRUCTION  
BUREAU OF BRIDGES

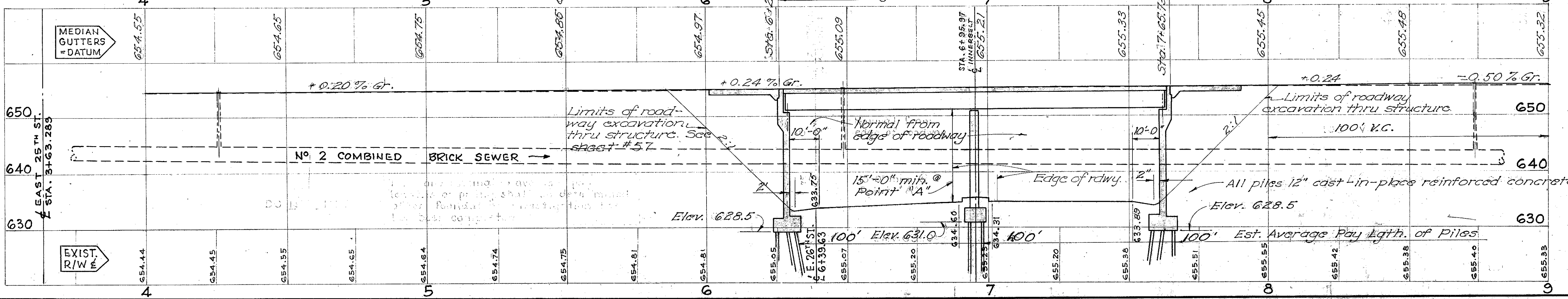
**COMMON DETAILS FOR  
STRUCTURES OVER INNERBELT  
22<sup>ND</sup> STREET TO SUPERIOR AVE.  
SECTION CUY-42E-18.81**

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MORRIS	MORRIS	RET.	D.C.H.	BFG	8-23-57	





Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division Office, but the State assumes no responsibility for the accuracy thereof.



**SITE PLAN - CHESTER AVE - INNERBELT BRIDGE**

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

101  
124

**CUYAHOGA COUNTY**  
**CUY-42R-18.81**  
**CUY-322-(1.08-1.39)**

**GENERAL NOTES**

**REFERENCE** shall be made to Supplemental Specification S-114, dated Rev. 8-1-57 and Std. Drwg. CSB-2-56, sheet no. 3, dated 12-3-56.

**DESIGN SPECIFICATIONS:** This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54 and 2-1-55.

**UTILITY LINES:** All labor and expense involved in relocating the affected utility lines shall be borne by the respective owners of the lines. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either shall be held to a minimum.

**PILES** shall be driven to a minimum bearing capacity of 40 tons.

**PILE TEST LOAD:** A pile test load shall be applied if and where directed by the Engineer.

**WELDED STEEL:** The steel for the 36 WF 230 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-74(a) of the Construction and Material Specifications) or to A-373.

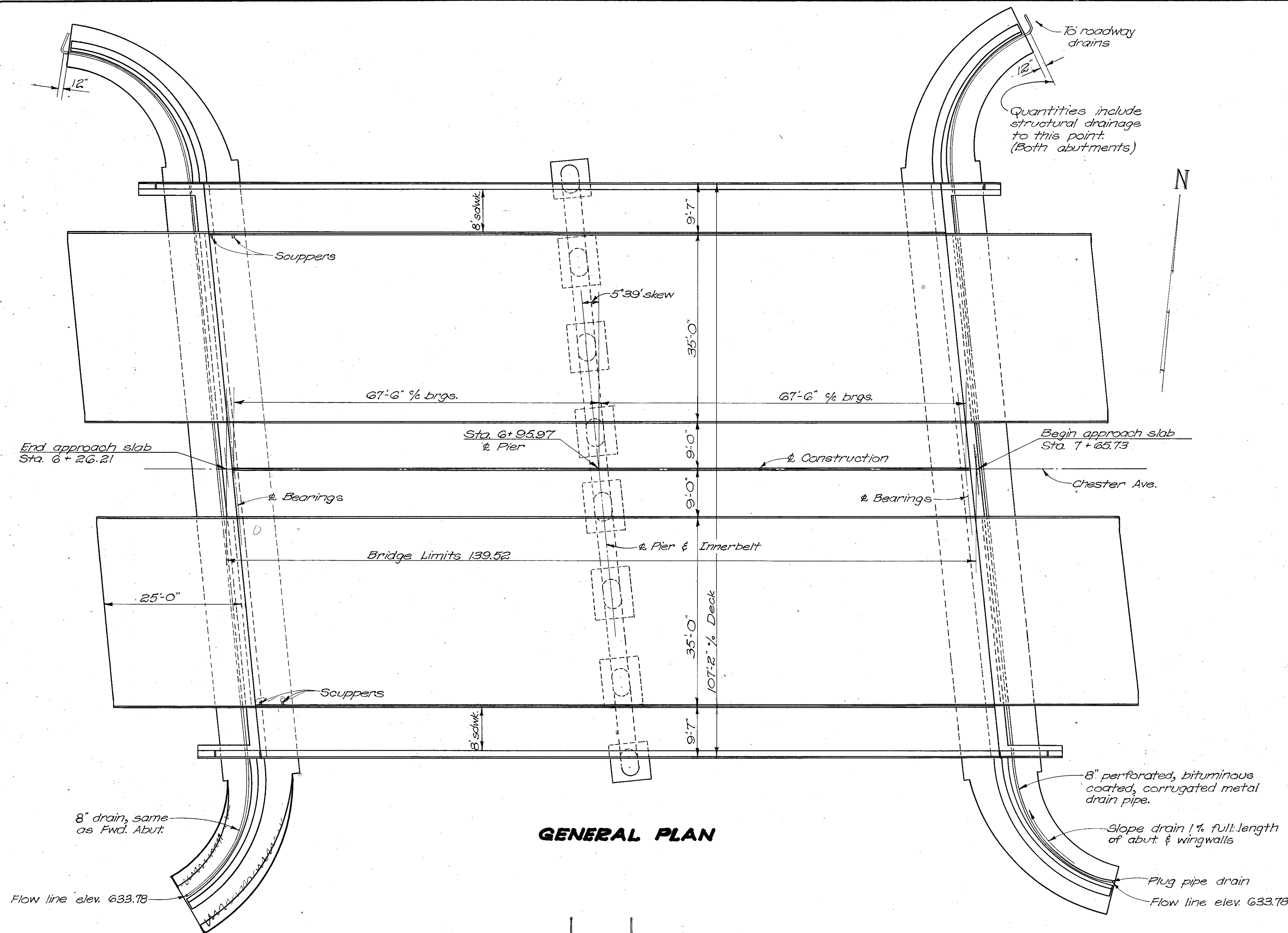
**WELDING OF STRUCTURAL STEEL:** Welds shown as field welds may, at the option of the Contractor, be made in the shop. All welds shall be Class "A" except as shown. Class "B" welds are shown thus:  $\curvearrowright$

**GALVANIZING** of all members which are specified to be galvanized shall be as called for in Sec. M-74(d).

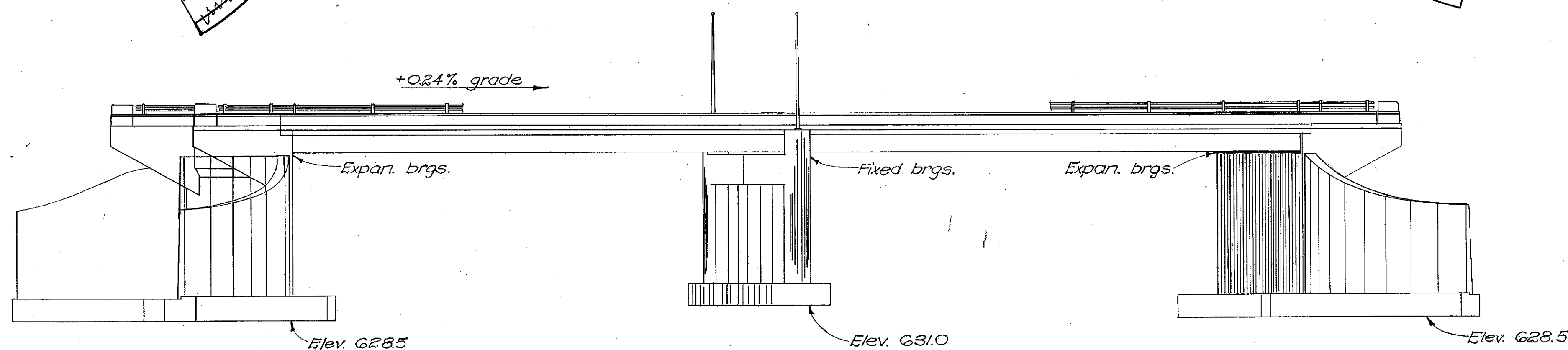
**SURFACE FINISH OF CONCRETE:** Exposed faces of abutments, wingwalls and piers shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

**DECK CONSTRUCTION PROCEDURE:** In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections, between transverse construction joints which are normal to the centerline of bridge and are located near the center of any span.

**TEMPORARY RUN-AROUND STREET** shall be provided. Width face to face of curbs 56 ft. Width out to out of shoulders 74 ft., 5 ft. wide sidewalk on north side. Pavement 9" 7-70" with Type 2-A concrete curbs (Std. Dwg. I-12). Sidewalk shall be 4" thick and shall be according to Item I-13 except concrete may be same as pavement concrete. See Sheet No. 31 for additional details.



**GENERAL PLAN**



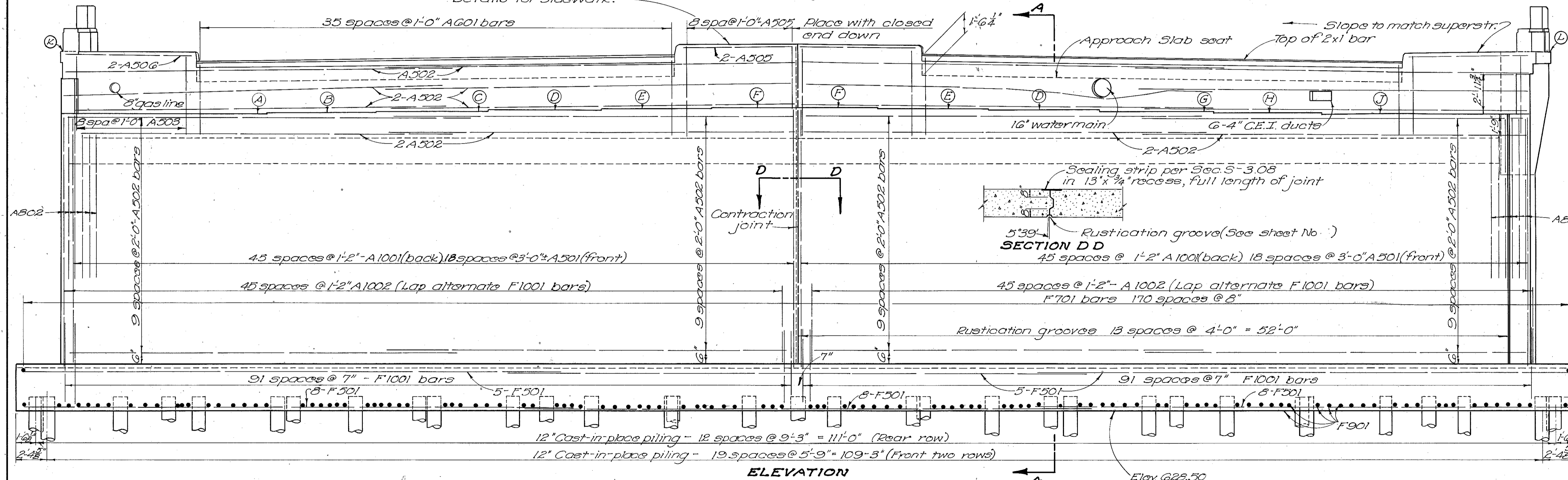
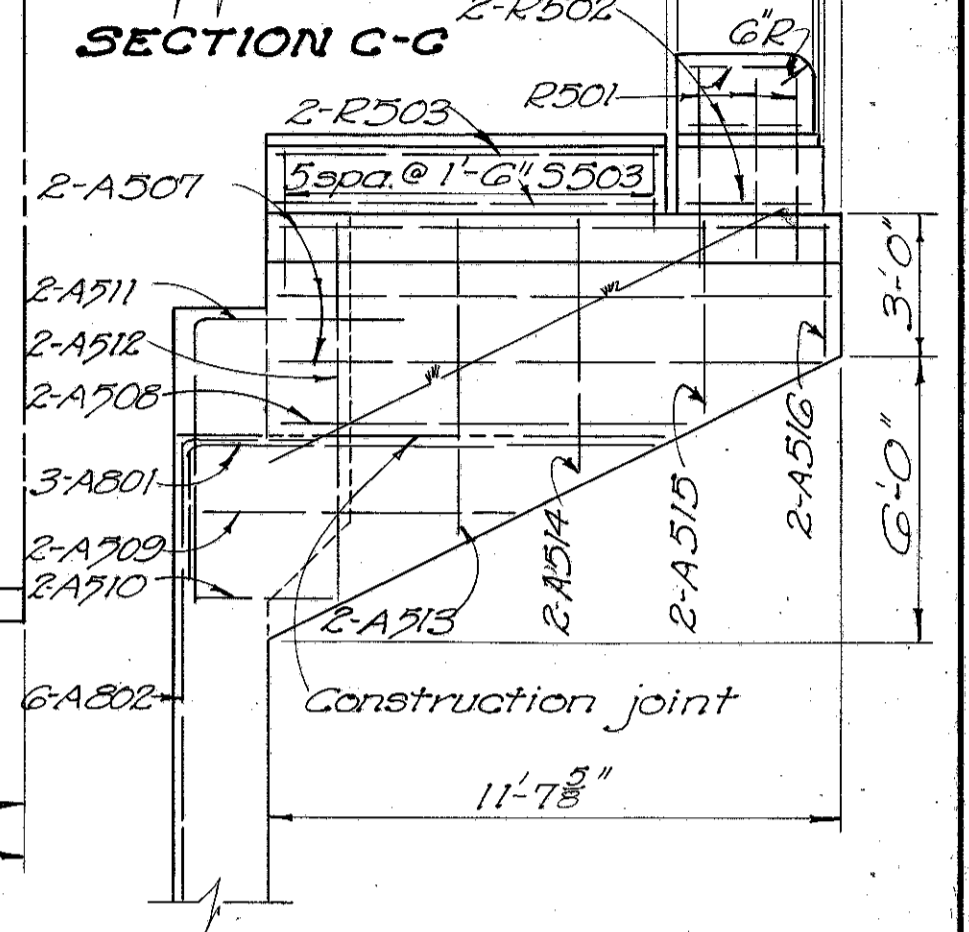
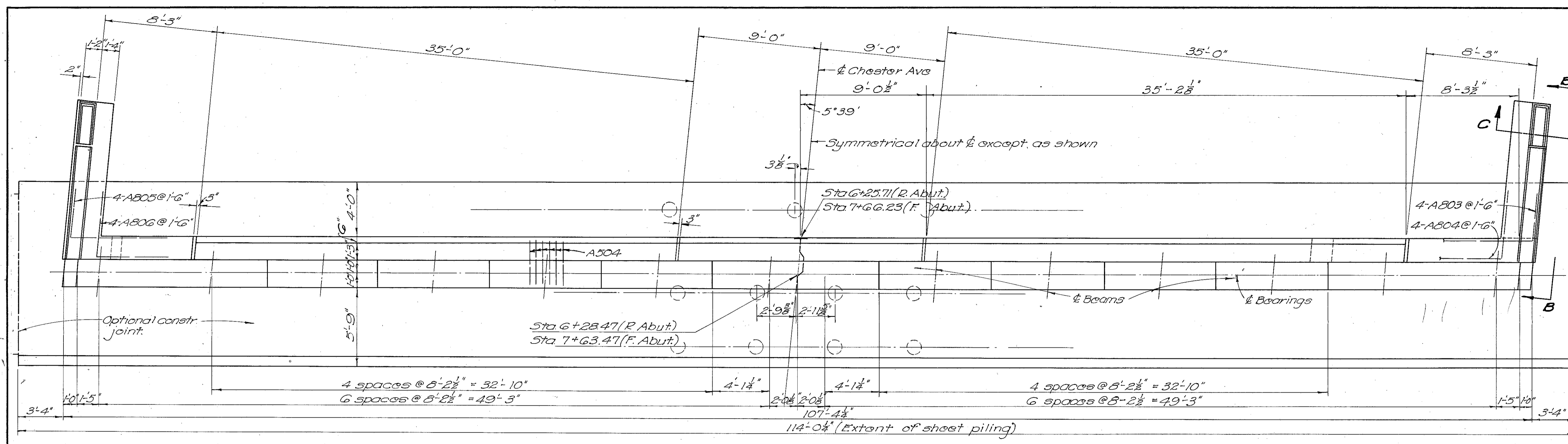
**ELEVATION** (Piling not shown)

Revised 10/9/58 RHN

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
<b>GENERAL PLAN, ELEVATION &amp; NOTES</b>						
BRIDGE No. CUY-42-1932 INNERBELT FREEWAY UNDER CHESTER AVENUE CUYAHOGA COUNTY STA. 26+61.13						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NORRIS	NORRIS	Pat	Roy	BFG	9/8/57	



CUYAHOGA COUNTY  
 CUY-42R-18.81  
 CUY-322-(108-139)

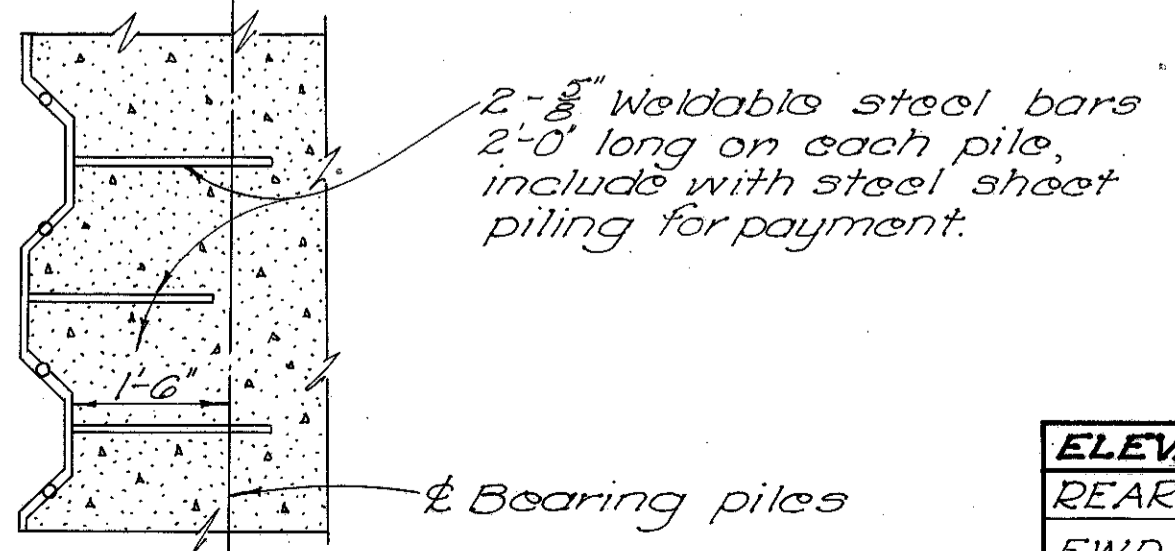


NOTES: Porous backfill, as shown, shall extend full length of abutment and wings.

Reinforcing in the backwall shall be placed to clear openings for the utilities.

Backwall concrete shall not be placed until all utility ducts carried on superstructure are installed. The duct Owners shall provide suitable protective expansive material around ducts thru backwall. This material may be sponge rubber, cork or any commercial joint filler equivalent to 1" preformed expansion jt. filler described in Sec. M-10.02.

Utility openings are shown for forward abutment, rear abutment opposite hand.



ELEVATIONS	A	B	C	D	E	F	G	H	J	K	L
REAR ABUT.	650.46	650.59	650.72	650.85	650.98	651.10	650.73	650.60	650.48	655.25	655.23
FWD ABUT.	650.78	650.91	651.04	651.17	651.30	651.43	651.05	650.93	650.80	655.53	655.57

STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

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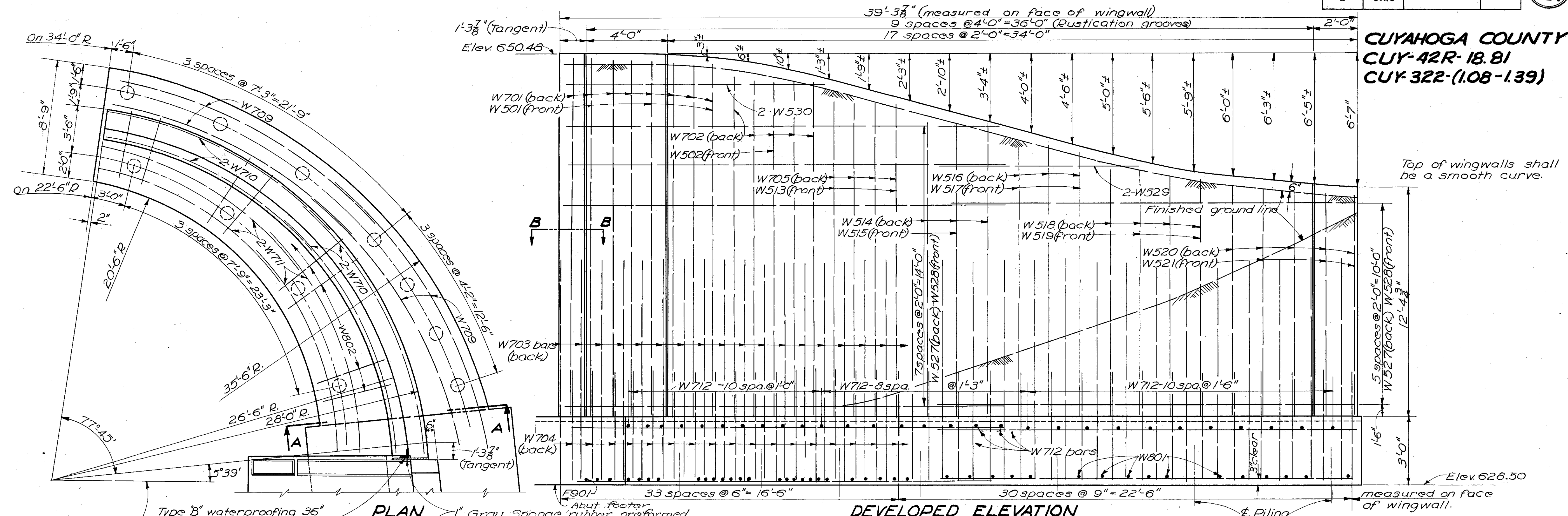
**ABUTMENT DETAILS**  
 BRIDGE No. CUY-42-1932  
 INNERBELT FREEWAY UNDER  
 CHESTER AVENUE

CUYAHOGA COUNTY STA. 26+61.13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NORRIS	NORRIS	rdg	Ry	BFG	2/15/57	

SHEET PILE PLAN

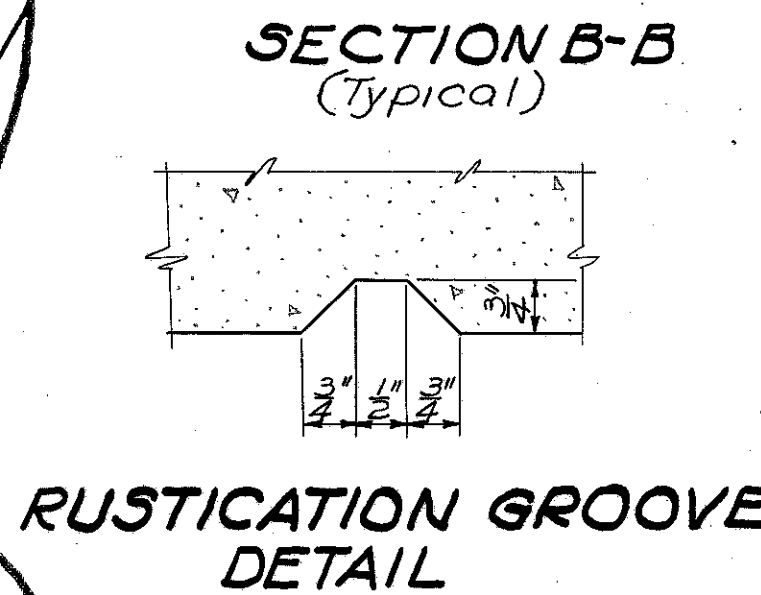
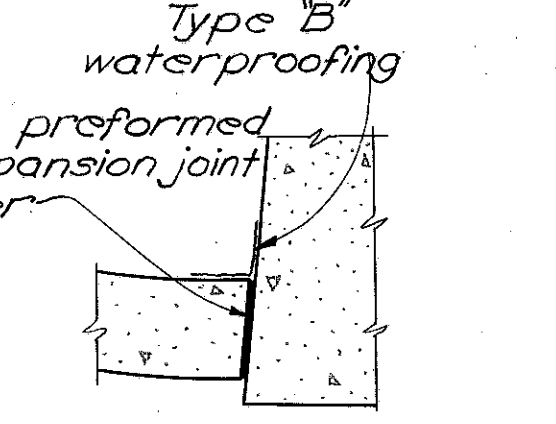
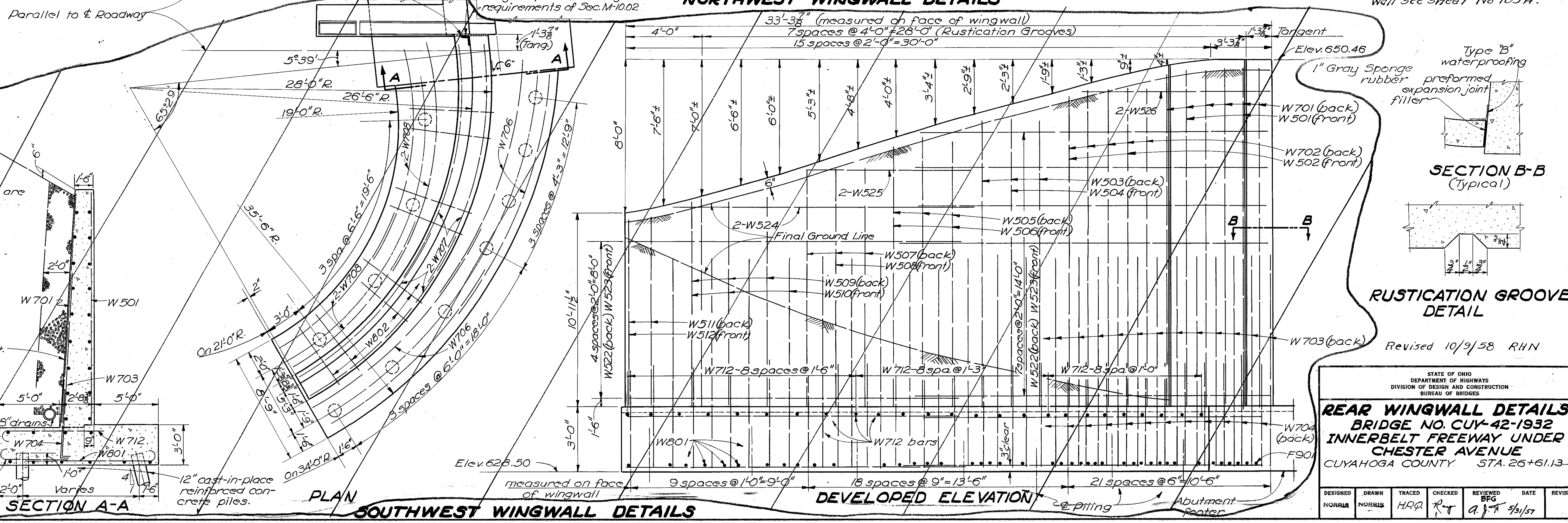
**CUYAHOGA COUNTY**  
**CUY-42R-18.81**  
**CUY-322-(1.08-1.39)**



Top of wingwalls shall be a smooth curve.

For details of southwest wingwall see sheet No 103A.

**NORTHWEST WINGWALL DETAILS**



STATE OF OHIO  
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 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

**REAR WINGWALL DETAILS**  
**BRIDGE NO. CUY-42-1932**  
**INNERBELT FREEWAY UNDER**  
**CHESTER AVENUE**  
 CUYAHOGA COUNTY STA. 26+61.13-

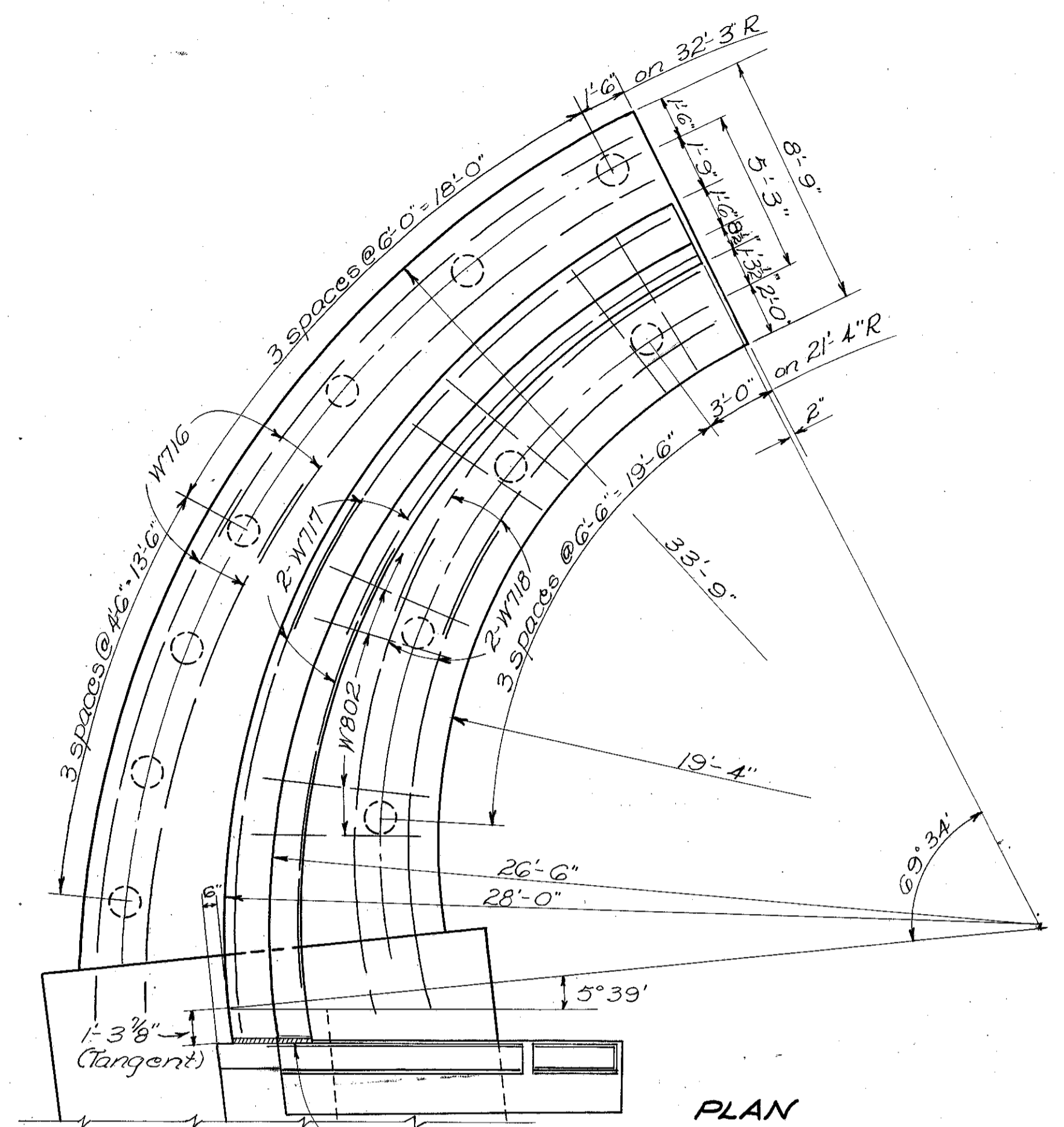
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NORRIS	NORRIS	HQP	RJ	BFG	5/31/57	



**CUYAHOGA COUNTY**  
**CUY-42R-18.81**  
**CUY-322-(108-139)**

NOTE: Top of wingwalls shall be a smooth curve.

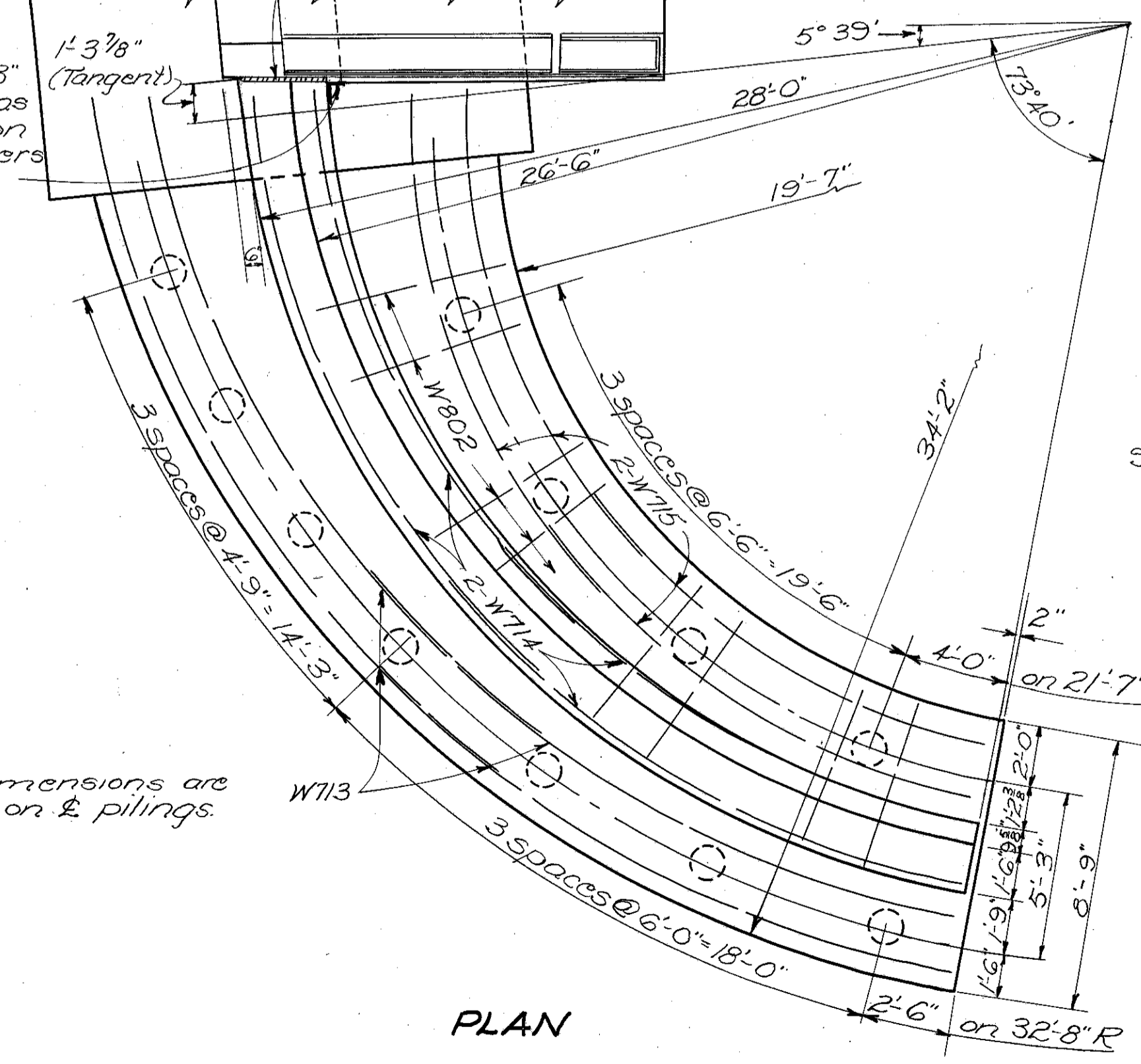
For rustication groove details, see Sheet No. **99A**



**PLAN**

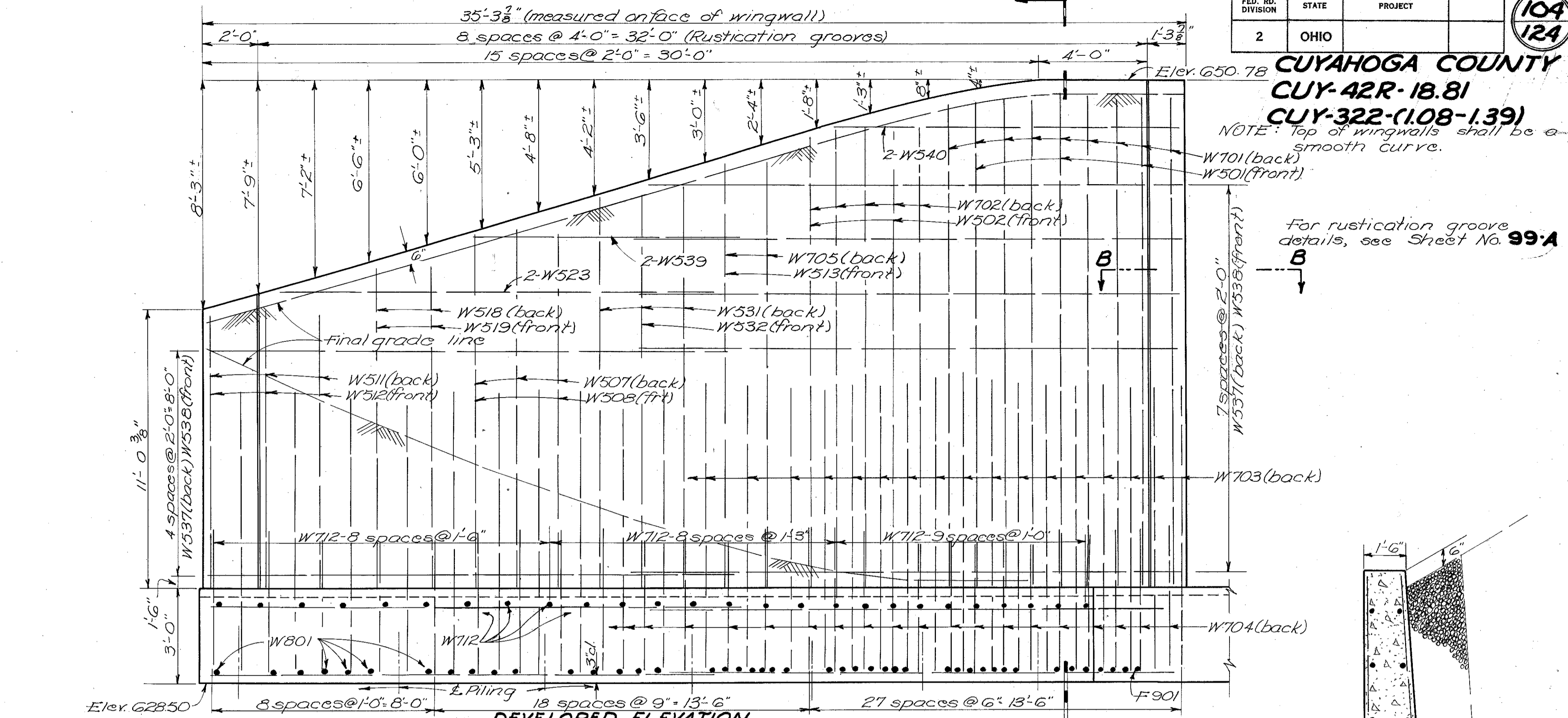
1" Gray Sponge rubber preformed expansion joint, filler full height of wall, meeting the requirements of Sec. M-10.02

36" wide Type "B" waterproofing as per Sec. 5-3 on all four corners of bridge.



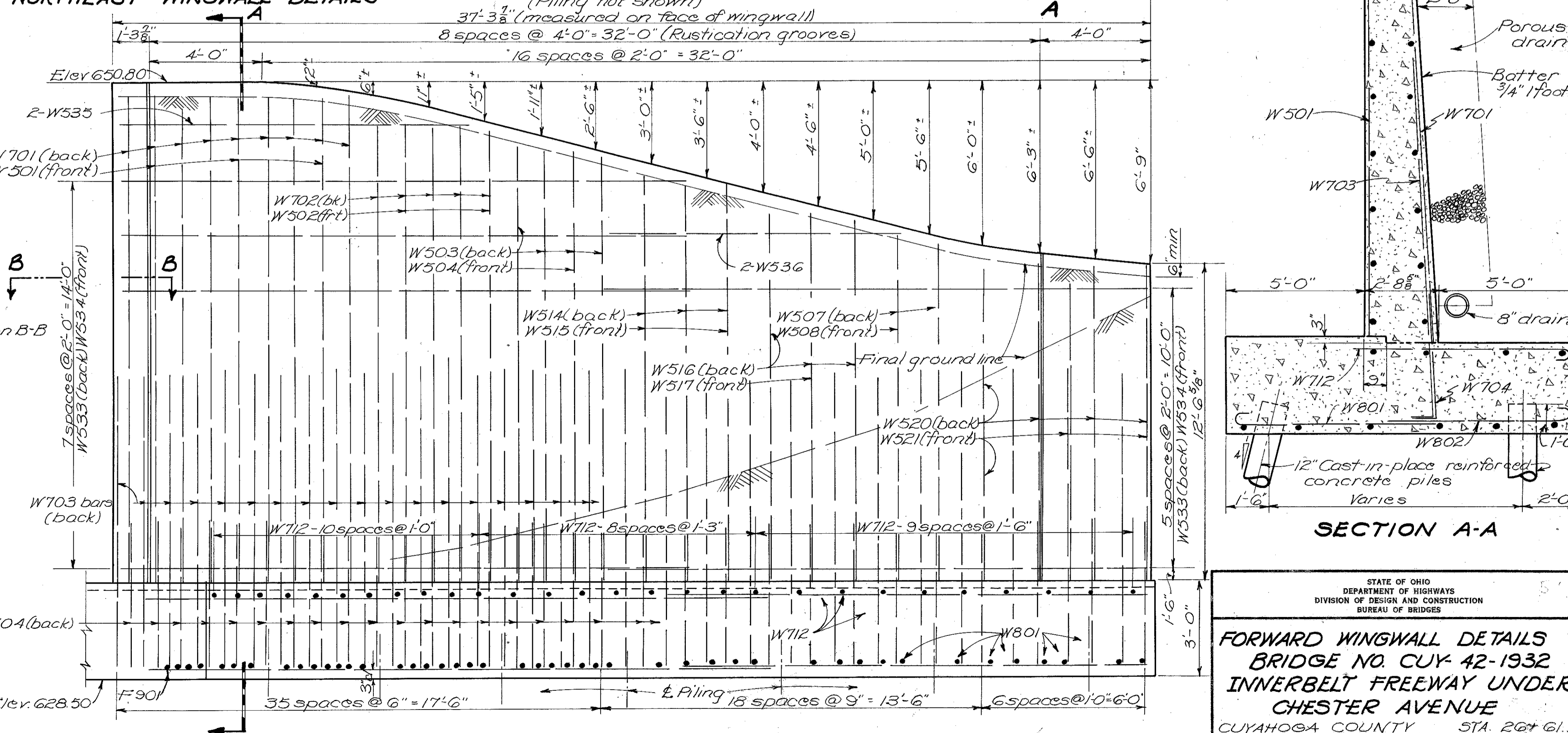
**PLAN**

All piling dimensions are measured on  $\perp$  piling.



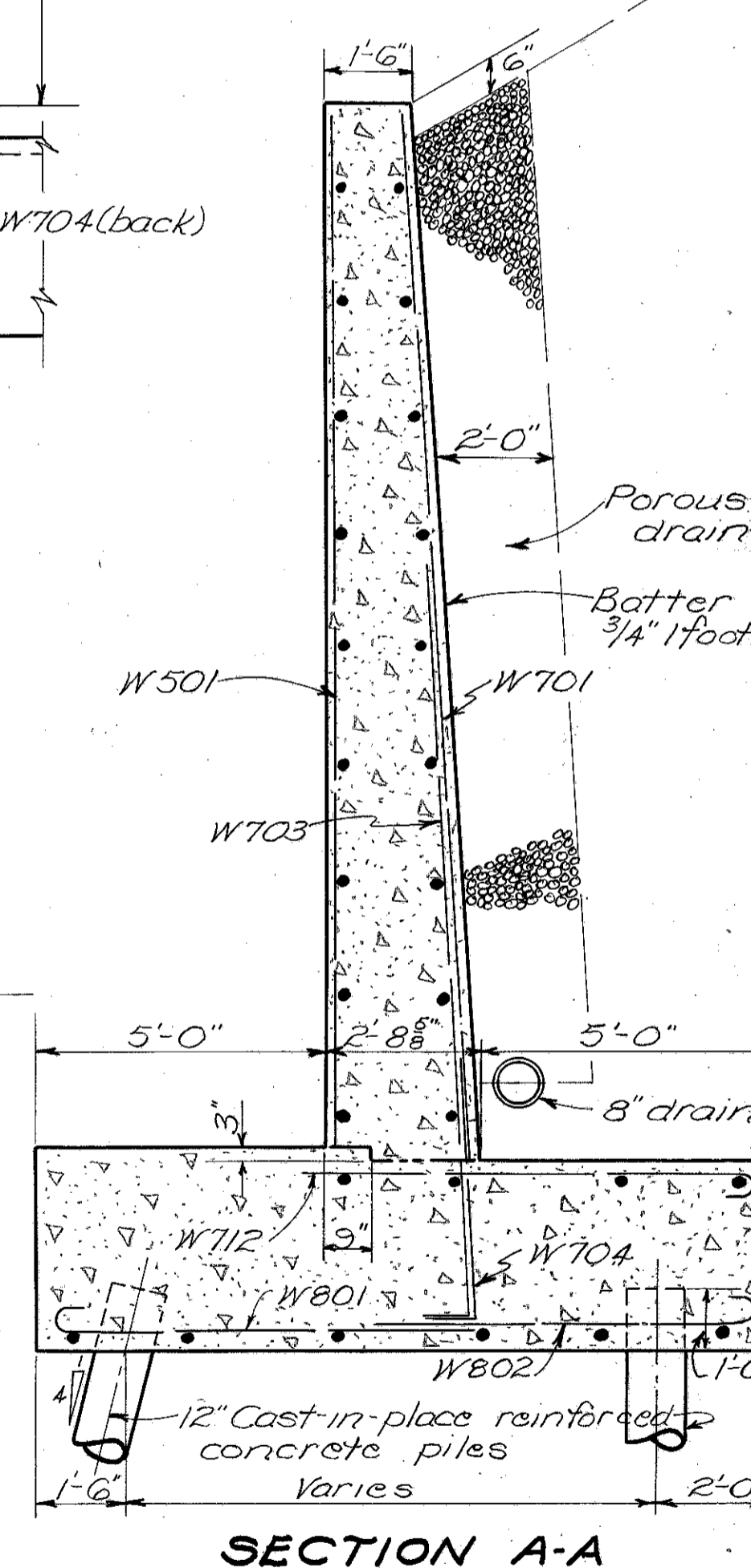
**NORTHEAST WINGWALL DETAILS**

**DEVELOPED ELEVATION**  
(Piling not shown)



**SOUTHEAST WINGWALL DETAILS**

**DEVELOPED ELEVATION**  
(Piling not shown)

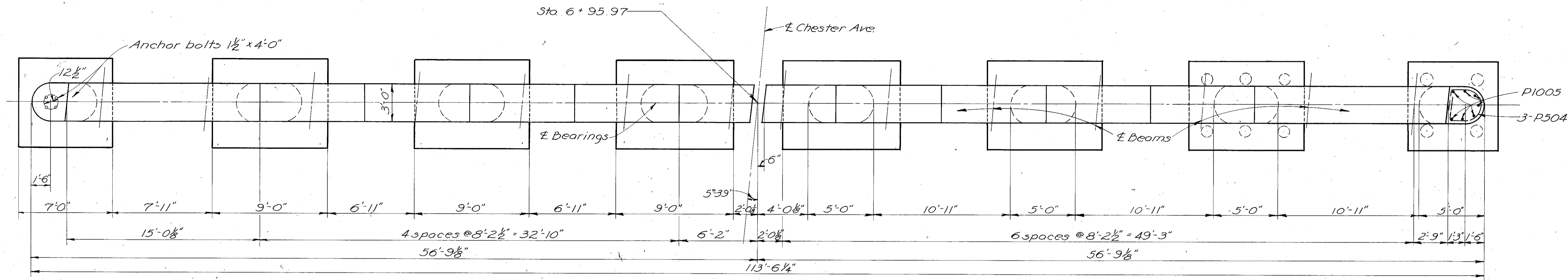


**SECTION A-A**

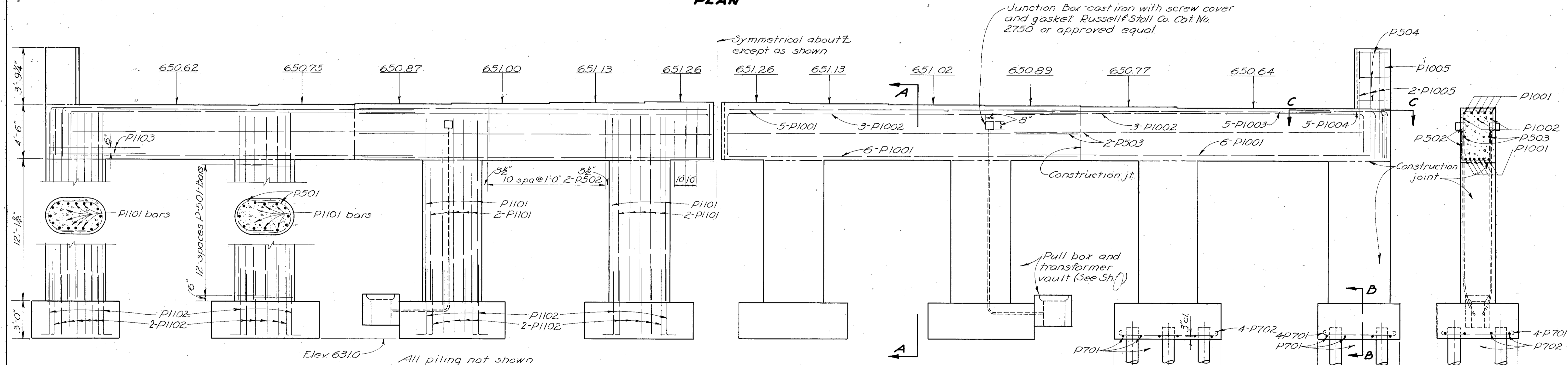
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
<b>FORWARD WINGWALL DETAILS</b>						
<b>BRIDGE NO. CUY-42-1932</b>						
<b>INNERBELT FREEWAY UNDER</b>						
<b>CHESTER AVENUE</b>						
CUYAHOGA COUNTY STA. 26+61.13						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NORRIS	NORRIS	R	R	BFG	5/31/57	

**CUYAHOGA COUNTY**  
**CUY-42R-18.81**  
**CUY-322-(1.08-1.39)**

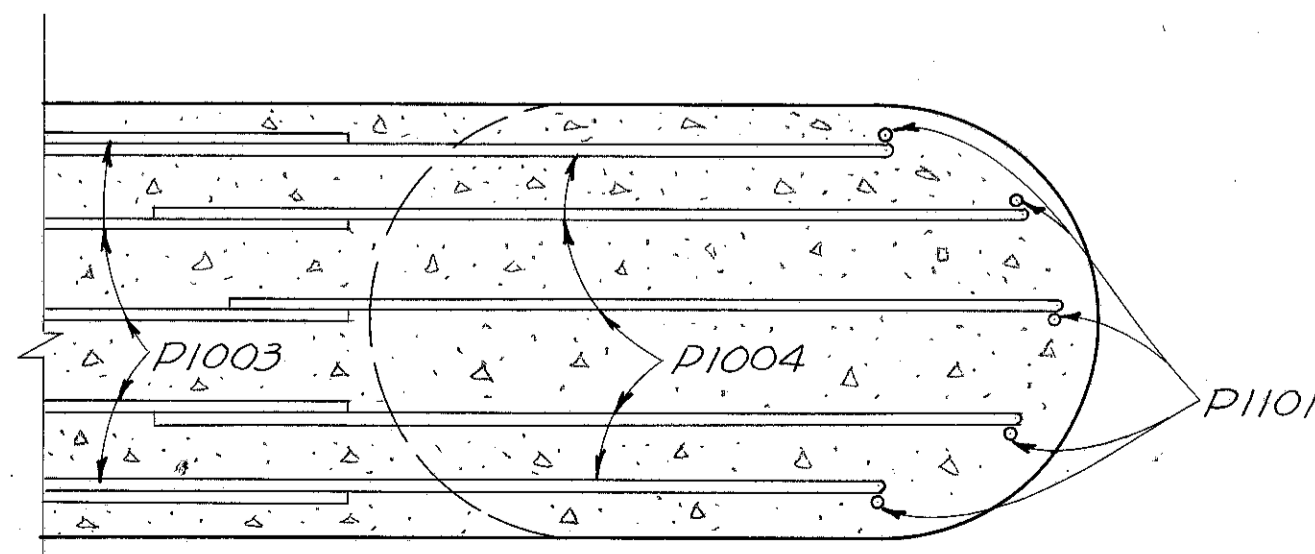
Note: For details of Electrical Grounds, see sheet 99-A.



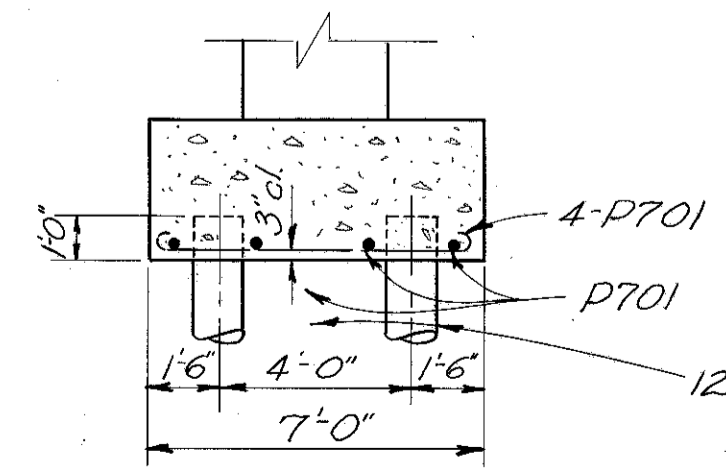
**PLAN**



**ELEVATION**



**SECTION C-C**



**SECTION B-B**

Note: Reinforcing steel in cap shall be placed to clear anchor bars.

12" Cast-in-place concrete piling

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
DIVISION OF DESIGN AND CONSTRUCTION  
BUREAU OF BRIDGES

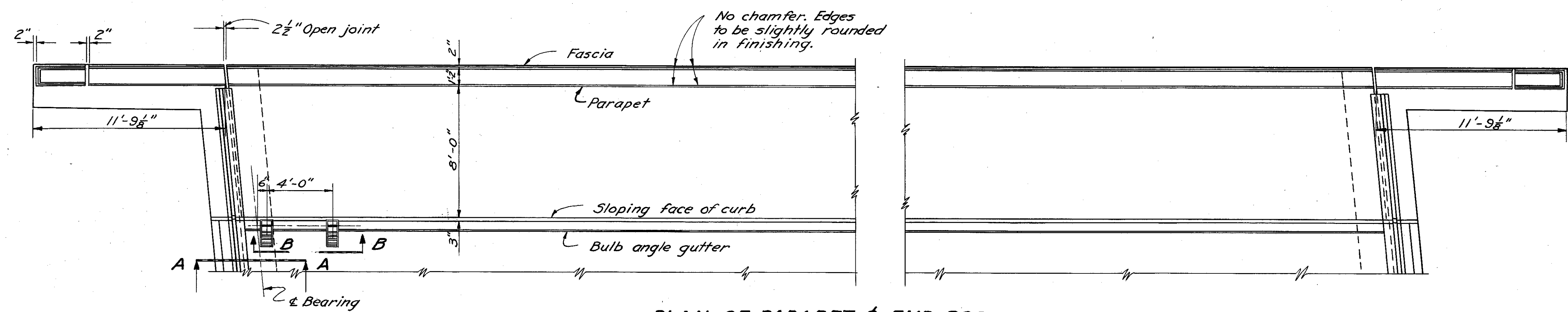
**PIER DETAILS**  
**BRIDGE No. CUY-42-1932**  
**INNERBELT FREEWAY UNDER**  
**CHESTER AVENUE**

CUYAHOGA COUNTY STA. 26+61.13

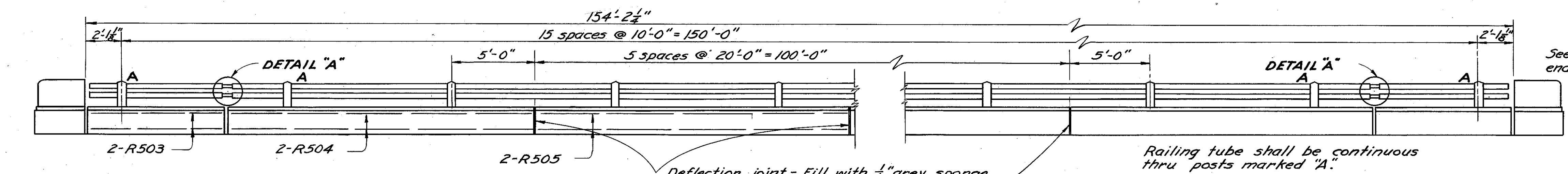
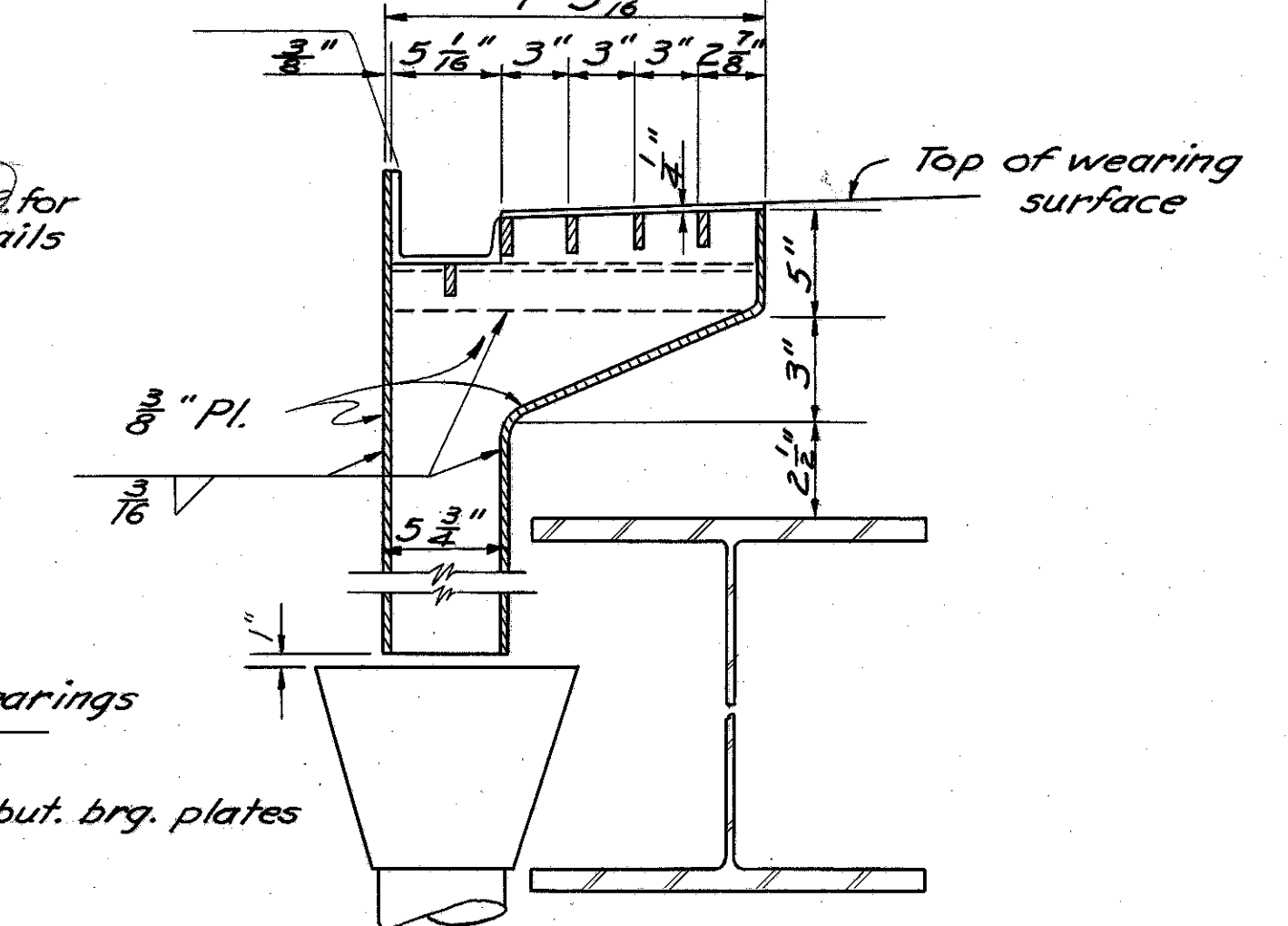
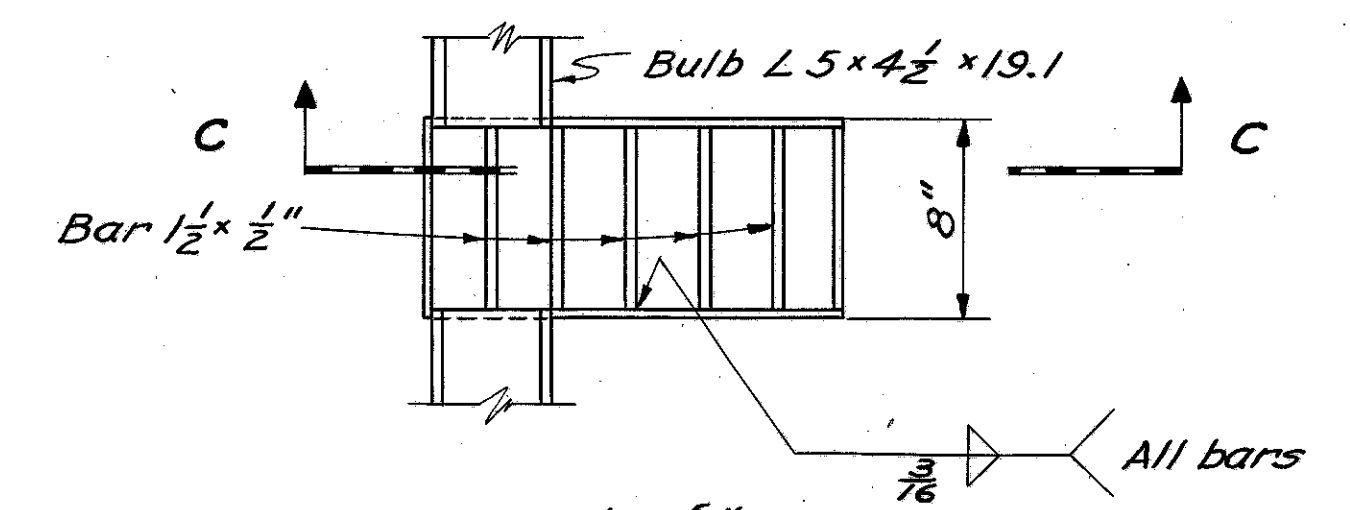
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NORRIS	NORRIS	R	Roy	BFG	9/24/57	



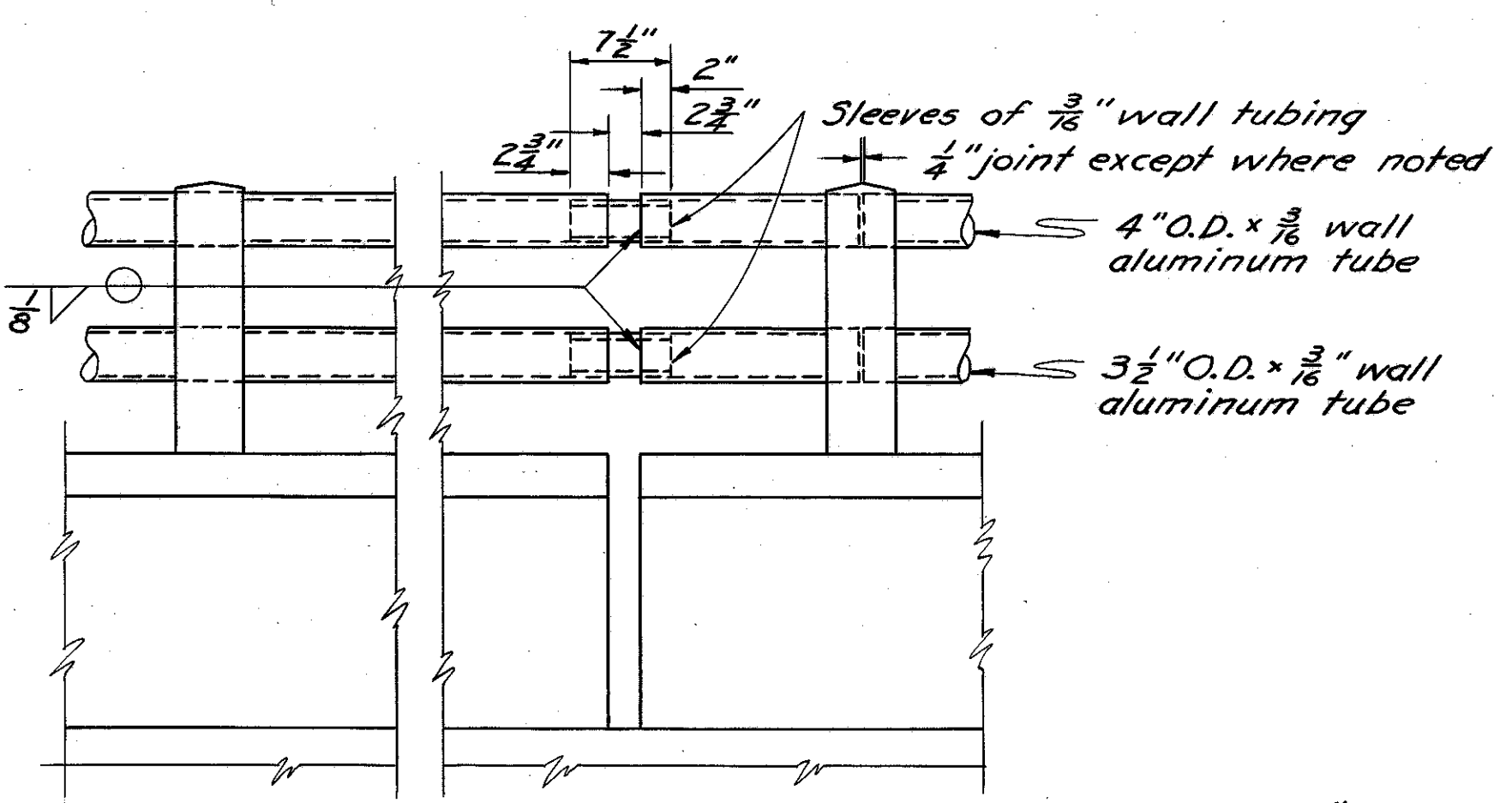
**CUYAHOGA COUNTY**  
**CUY-42R-18.81**  
**CUY-322-(1.08-1.39)**



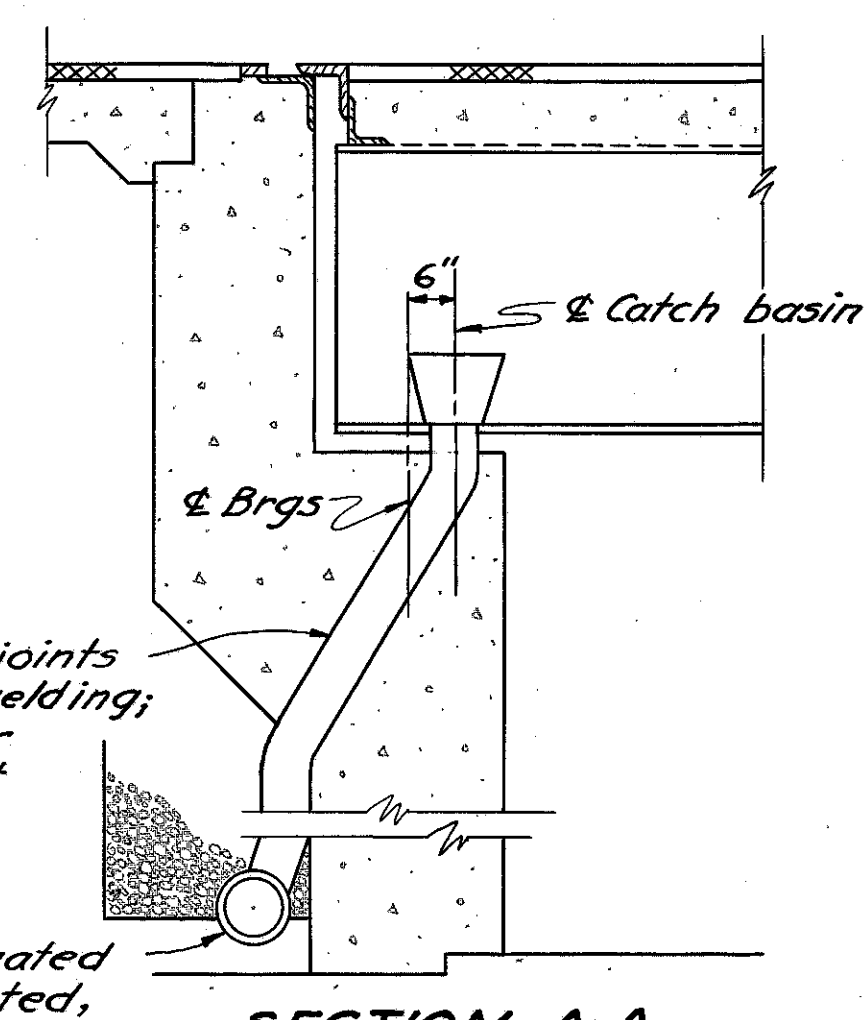
**PLAN OF PARAPET & END POST**  
 (Railing not shown)



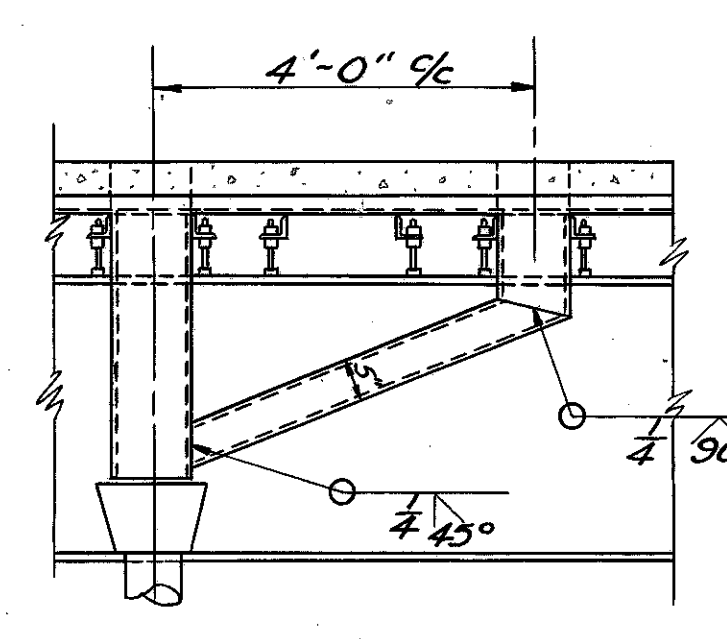
**ELEVATION OF RAILING & PARAPET**



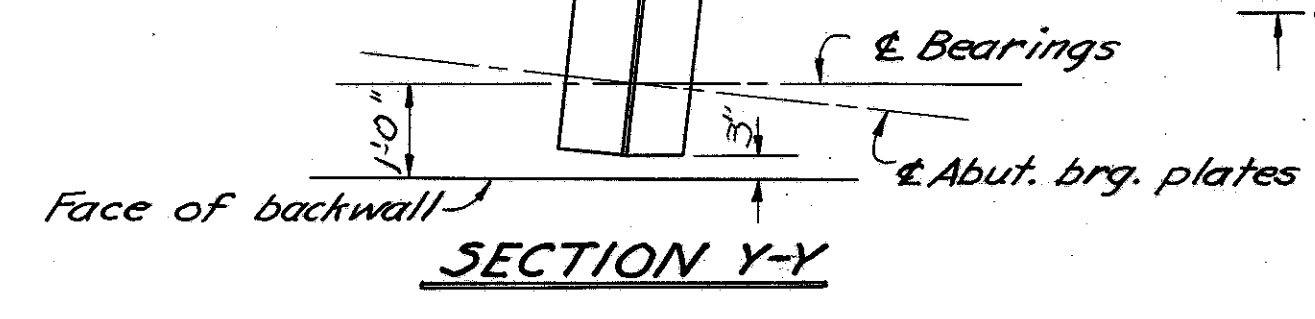
**DETAIL "A"**



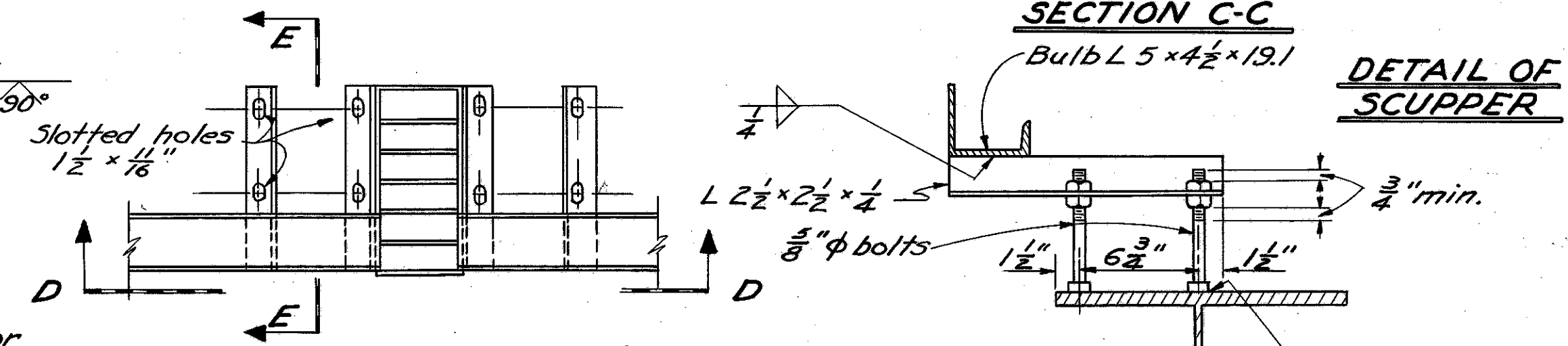
**SECTION A-A**



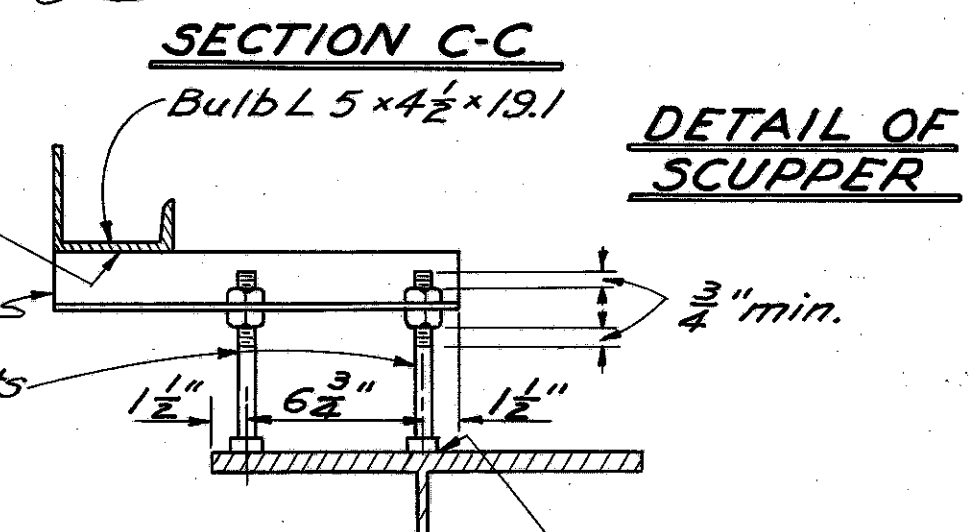
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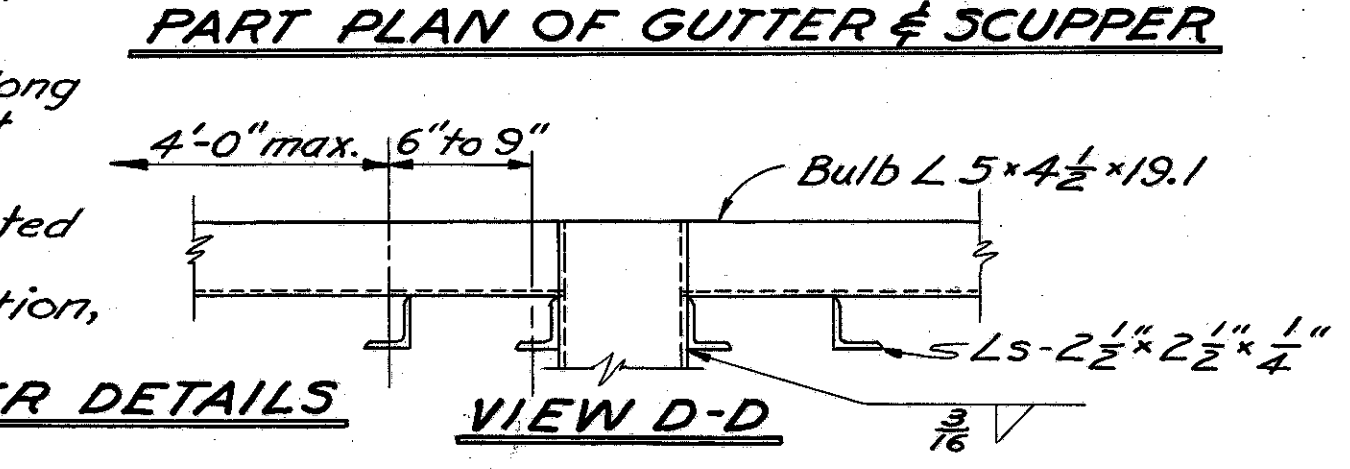
**SECTION Y-Y**



**PART PLAN OF GUTTER & SCUPPER**

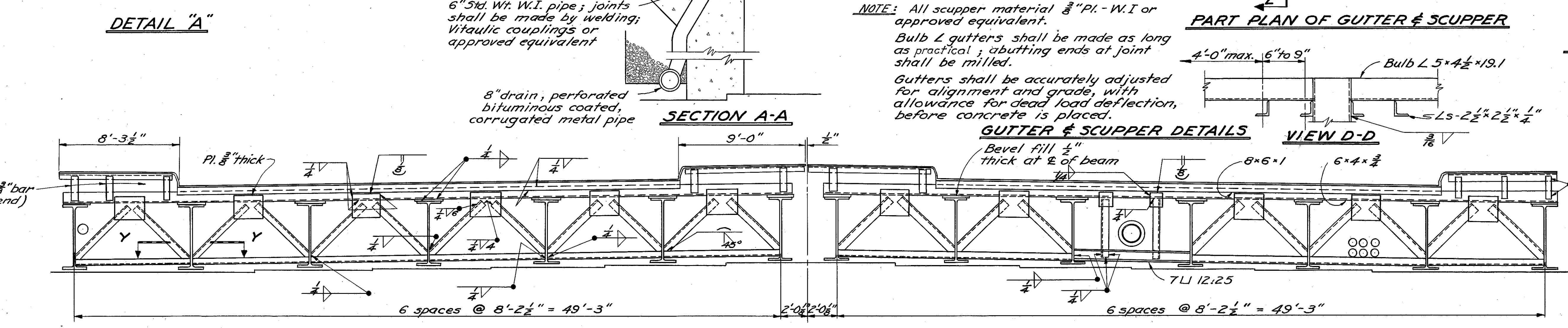


**DETAIL OF SCUPPER**

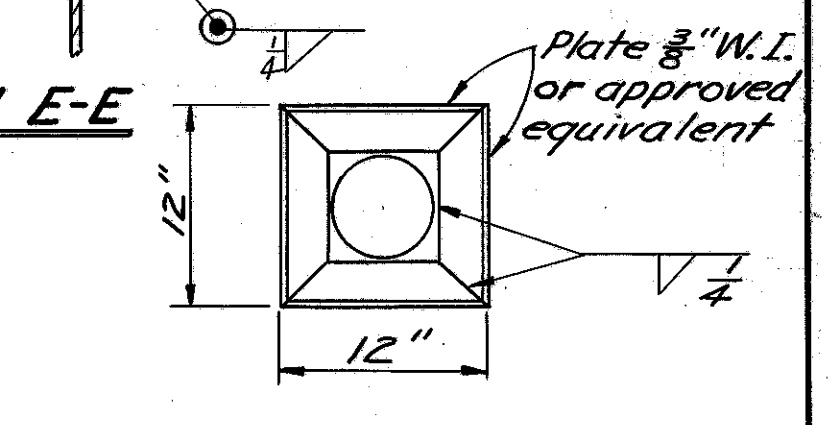


**VIEW D-D**

**GUTTER & SCUPPER DETAILS**



**END FINISH DETAILS AT REAR ABUTMENT** (Looking normal to end finish)  
 End finish details are opposite hand at Forward Abutment  
 (All Ls 4x4x 3/8)



**CATCH BASIN**

**NOTE:** All scupper material 3/8" Pl. - W.I. or approved equivalent.  
 Bulb L gutters shall be made as long as practical; abutting ends at joint shall be milled.  
 Gutters shall be accurately adjusted for alignment and grade, with allowance for dead load deflection, before concrete is placed.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES							
<b>SUPERSTRUCTURE, DRAINAGE &amp; RAILING DETAILS</b>							
BRIDGE NO. CUY-42-1932							
INNERBELT FREEWAY UNDER CHESTER AVENUE							
CUYAHOGA COUNTY STA. 26+61.13							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
NORRIS	NORRIS	JGW.	Ry	BFG	5/31/57		

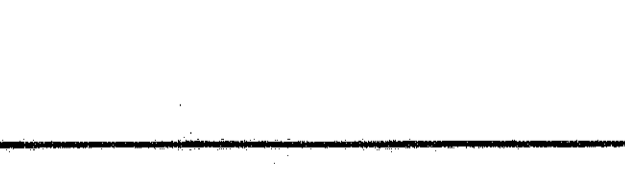
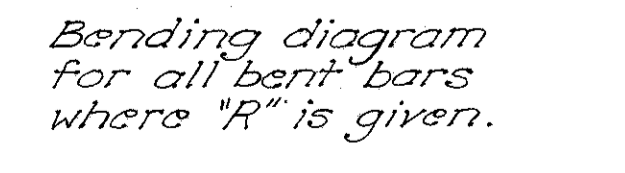
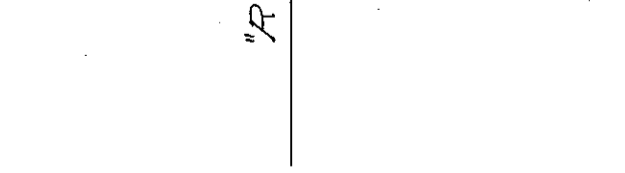
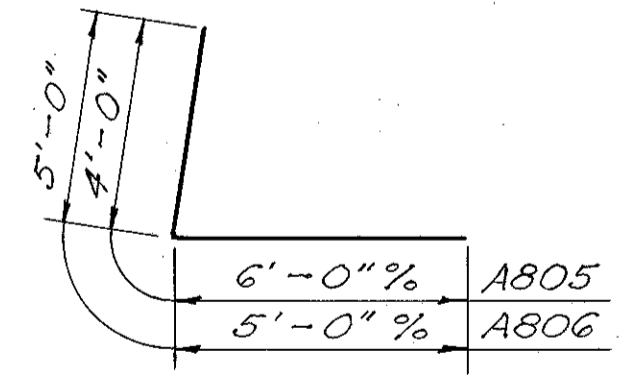
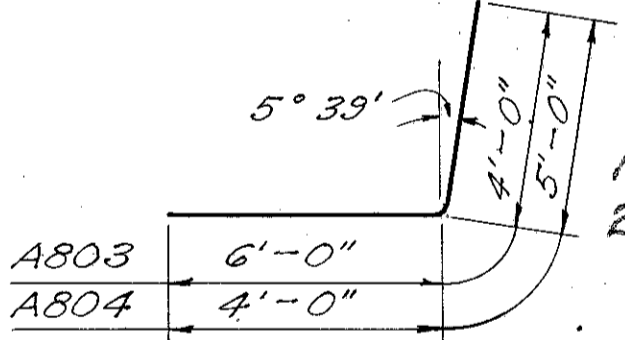
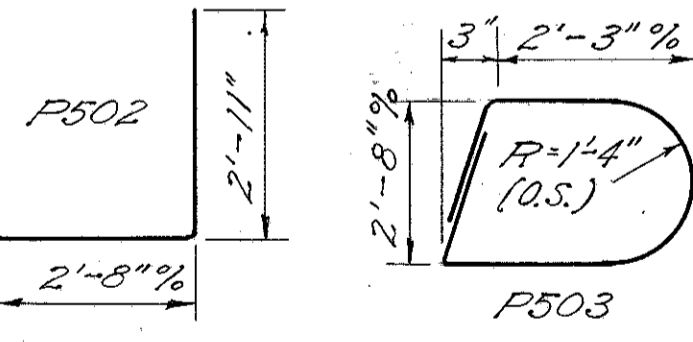
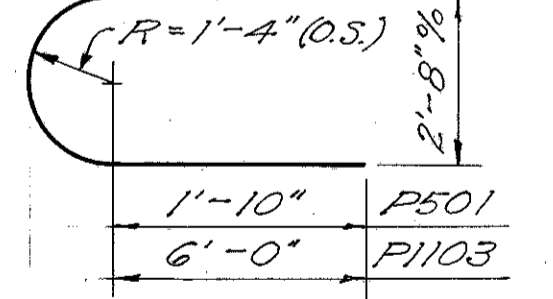
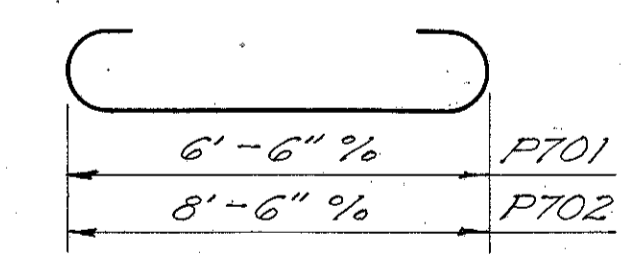
**CUYAHOGA COUNTY**  
**CUY-42R-18.81**  
**CUY-322-(1.08-1.39)**

**REINFORCING STEEL LIST**

Mark	No.	Length	Weight	Shp.	Bending Diagrams	Mark	No.	Length	Weight	Shp.	Bending Diagrams	Mark	No.	Length	Weight	Shp.	"R"
<b>Superstructure</b>																	
S701	410	37'-6"	31,426	S		<b>Abutments</b>											
S702	410	9'-3"	7,752	S		A1001	184	19'-0"	15,043	S		<b>Wingwalls</b>					
S703	820	6'-4"	10,615	B		A1002	184	6'-0"	4,751	S		W801	63	9'-4"	416	B	4660
S704	410	8'-8"	7,263	S		A801	12	11'-4"	363	B		W802	32	6'-7"	562	B	2099
S601	410	38'-10"	23,914	B		A802	24	13'-10"	886	B		W701	29	18'-8"	1069	S	3289
S602	832	35'-6"	44,363	S		A803	8	9'-11"	83	B		W702	20	17'-6"	715	S	1372
S603	94	32'-0"	4,518	S		A804	8	8'-11"	74	B		W703	17	12'-8"	3030	B	
S604	410	12'-1"	7,441	B		A805	8	9'-11"	83	B		W704	114	5'-6"	1282	B	
S605	410	11'-3"	6,928	B		A806	8	9'-11"	83	B		W705	6	16'-0"	196	S	
S501	182	6'-9"	1,281	B		A601	144	14'-2"	3063	B		W706	4	18'-7"	152	B	34'-0"
S502	182	6'-3"	1,186	B		A501	76	18'-9"	1486	S		W707	8	17'-6"	286	B	27'-0"
S503	206	4'-11"	1,057	B		A502	216	27'-6"	6,195	S		W708	8	15'-0"	245	B	21'-0"
R504	16	18'-0"	*	S		A503	72	13'-2"	988	B		W709	4	21'-0"	172	B	34'-0"
R505	40	19'-8"	*	S		A504	168	4'-5"	714	B		W710	8	19'-0"	311	B	27'-0"
* To be paid for with bridge railing.																	
<b>Pier</b>																	
P1101	104	16'-0"	8841	S		A505	8	8'-6"	71	S		W711	8	16'-8"	273	B	21'-0"
P1102	104	7'-5"	4,098	B		A506	8	9'-0"	75	S		W712	109	8'-3"	1827	B	1922
P1103	4	14'-0"	298	B		A507	24	11'-3"	282	S		W713	4	21'-3"	174	B	33'-0"
P1001	34	29'-0"	4,243	S		A508	8	8'-3"	69	S		W714	4	19'-0"	311	B	27'-0"
P1002	12	32'-3"	1,665	B		A509	8	6'-9"	56	S		W715	8	16'-9"	274	B	21'-0"
P1003	10	24'-7"	1,058	S		A510	8	3'-0"	25	S		W716	4	20'-3"	166	B	33'-0"
P1004	10	12'-7"	541	B		A511	8	7'-10"	66	B		W717	4	18'-0"	294	B	27'-0"
P1005	14	8'-0"	482	S		A512	8	8'-0"	67	S		W718	8	15'-10"	259	B	21'-0"
P701	52	8'-2"	867	B		A513	8	6'-6"	54	S		W501	11	18'-7"	213	S	387
P702	24	10'-2"	498	B		A514	8	5'-3"	44	S		W502	6	17'-8"	92	S	55
P501	208	5'-9"	1,247	B		A515	8	4'-0"	33	S		W503	7	16'-5"	120	S	69
P502	144	8'-3"	1,239	B		A516	8	2'-8"	22	S		W504	2	16'-6"	39	S	17
P503	8	28'-3"	236	S		F1001	366	7'-3"	11,418	B		W505	2	13'-0"	67	S	26
P504	6	11'-2"	70	B		F901	232	15'-6"	12,226	B		W506	2	14'-8"	31	S	
* To be paid for with bridge railing.																	
<b>Replacement Bars</b>																	
RE1100	1	7'-6"	-	S		F701	342	8'-10"	6,175	B		W507	2	13'-6"	113	S	71
RE1000	2	7'-2"	-	S		F501	78	39'-1"	3,179	S		W508	3	13'-9"	43	S	29
RE900	1	6'-10"	-	S		R501	8	9'-6"	*	B		W509	8	11'-11"	37	S	
RE800	1	6'-6"	-	S		R502	24	2'-6"	*	B		W510	3	11'-8"	36	S	34
RE700	4	6'-2"	-	S		R503	16	8'-0"	*	S		W511	3	10'-11"	57	S	33
RE600	5	5'-10"	-	S		P502	2	2'-8"	*	B		W512	2	10'-8"	46	S	
RE500	2	5'-7"	-	S		P503	3	2'-3"	*	B		W513	3	16'-8"	52	S	
* To be paid for with bridge railing.																	

\* Includes 24 bars for abutment.

\* To be paid for with bridge railing.



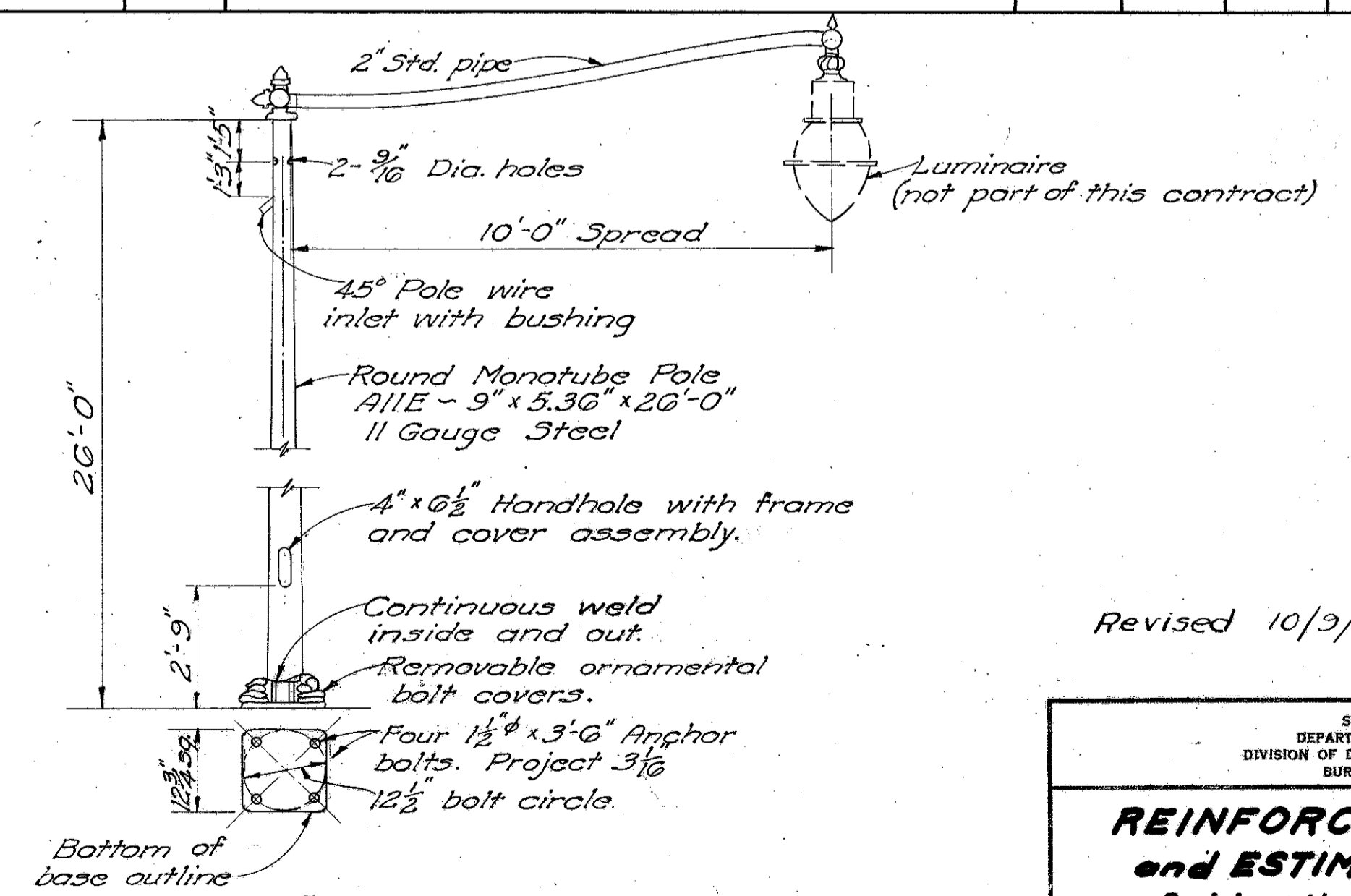
BAR SIZE is indicated in the bar mark. The first digit where three digits are used and the first two digits where four are used, indicate the bar size number. For example, A700 is a No. 7 size bar and A1014 is a No. 10 size.

REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has been previously tested and approved by the Ohio Testing Laboratory, test samples as provided in Sec. 5-4.02 need not be furnished and replacement bars will not be required.

Bending diagram for all bent bars where "R" is given.

**ESTIMATED QUANTITIES**

Item	Total	Unit	Description	Superst.	Pier	Abuts.	Wings	Gen.
E-2	lump	sum	Cofferdams cribs and sheeting					lump
E-2	1320	cu.yd.	Unclassified excavation		115	750	570	
E-2	1880	sq.ft.	Steel sheet piling, left in place			1880		
S-1	476	cu.yd.	Class "C" concrete, superstructure	476				
S-1	107	cu.yd.	Class "C" concrete, pier caps & columns		107			
S-1	13,168	cu.yd.	Class "C" concrete, wingwalls above footings				13,168	
S-1	427	cu.yd.	Class "E" concrete, abutment walls			427		
S-1	481,479	cu.yd.	Class "E" concrete, footings		52	285	138	144
S-3	49	lin.ft.	Waterproofing, preformed sealing strip			49		
S-3	1048	sq.yd.	Type "C" waterproofing	1048				
S-3	77	sq.yd.	Type "B" waterproofing					77
S-4	260,560	lb.	Reinforcing steel	147,744	25,383	67,734	19,699	21,592
S-4	500,000	lb.	Structural steel	500,000				
S-8	500,000	lb.	Field painting of structural steel	500,000				
S-9	162	sq.ft.	1" Gray sponge rubber preformed expansion joint filler					162
S-14	320.38	lin.ft.	Railing (aluminum rails and supports and concrete parapet and end posts)	320.38				
S-16	lump	sum	First test pile					lump
S-17	lump	sum	First pile test load					lump
S-17	590	1	Subsequent pile test load					1
S-18	19,400	lin.ft.	12" cast-in-place reinforced concrete piles		4400	10,600	4400	1500
S-25	lump	sum	Electric lighting system (lamp standards, junction & pull boxes)					lump
S-25	628	lin.ft.	2" electric conduit (fiber)	544	84			
S-29	269.64	lin.ft.	Subdrainage for wearing surface course	269.64				
S-29	460	cu.yd.	Porous backfill			320	140	
S-29	38	lin.ft.	6" wrought iron pipe and specials			38		
S-29	344	lin.ft.	8" perforated, bituminous coated, corrugated metal pipe			344		
S-15	Lump	Sum	Temporary run-around street					lump
7-35	73	cu.yd.	Asphaltic concrete surface course, Type "C" (60-70)	73				



**DETAIL OF LAMP STANDARD**

Revised 10/3/58 RHN

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
DIVISION OF DESIGN AND CONSTRUCTION  
BUREAU OF BRIDGES

**REINFORCING STEEL LIST**  
**and ESTIMATED QUANTITIES**  
Bridge No. CUY-42-1332  
**INNERBELT FREEWAY UNDER**  
**CHESTER AVENUE**  
Cuyahoga County Sta. 26+61.13

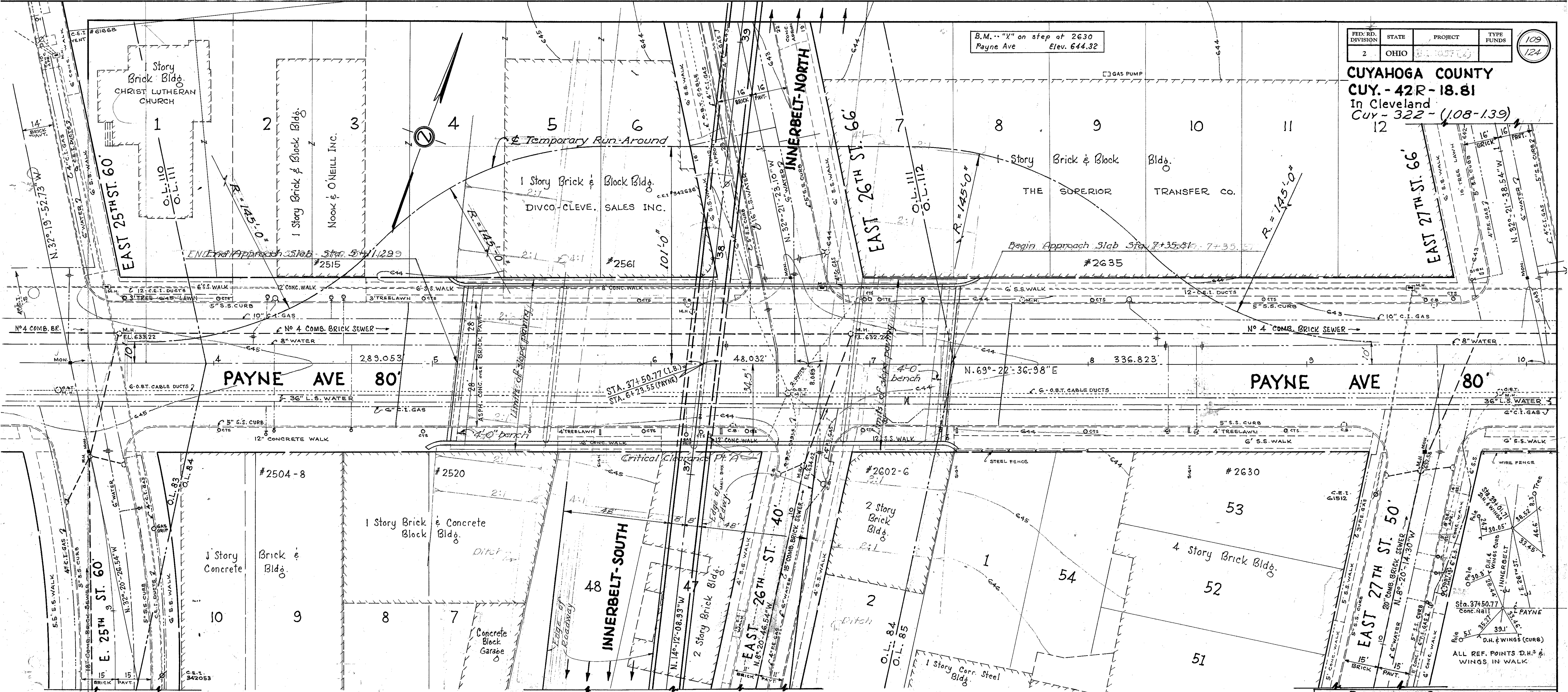
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NORRIS	NORRIS	prose	Ray	BFG	5/31/57	



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	109	124

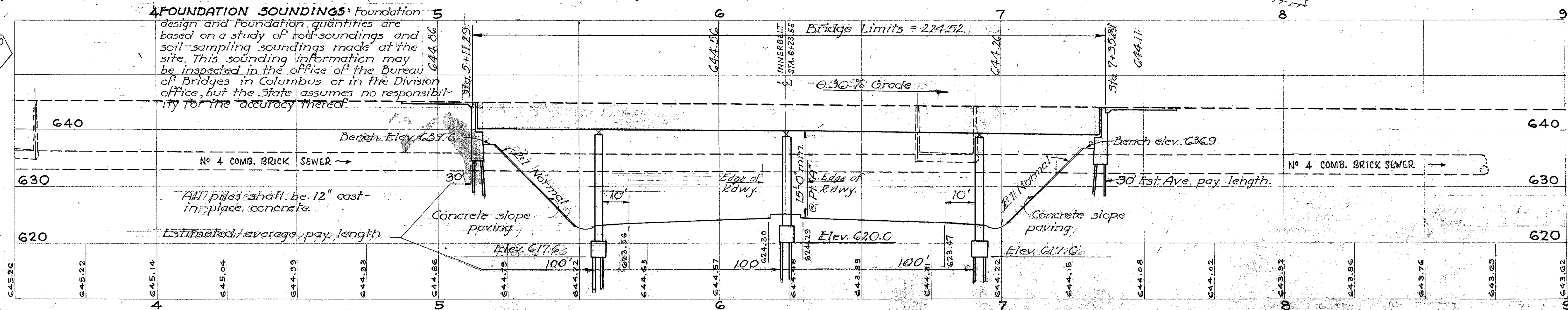
**CUYAHOGA COUNTY**  
**CUY. - 42R - 18.81**  
 In Cleveland  
**CUY - 322 - (108-139)**

B.M. "X" on step at 2630  
 Payne Ave Elev. 644.32



NOTE: STA. 0+00 = NORTH & E. 24TH ST.

**FOUNDATION SOUNDINGS** Foundation design and foundation quantities are based on a study of rod-soundings and soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State assumes no responsibility for the accuracy thereof.



**PROPOSED STRUCTURE**  
 Type: Continuous steel beam with concrete deck and concrete substructure.  
 Span: 42'-0" - 68'-42" bearings.  
 Roadway: 56'-0" w/ 6" curbs.  
 Sidewalks: 2'-0" 8'-0".  
 Load Frequency: CF = 2000(51).  
 Slew: 6'-25" L.F.  
 Wearing Surface: Bituminous.  
 Approach Slabs: 5'-1" - 54'(25' O.Very).  
 Alignment: Tangent.

STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 BUREAU OF BRIDGES

**SITE PLAN**  
 Bridge No CUY-42-1952

PAYNE AVE - INNERBELT BRIDGE  
 STA. 37+50.77  
 Scale 1" = 20'

TOPOGRAPHY	PROPOSED WORK
SURVEY DR. BY DESIGN	DR. BY CH'KD REVIEWED DATE
RHN RHN D.H.S. P.S. 2	

CUYAHOGA COUNTY  
 CUY-42R-18.81  
 CUY-322-(108-139)

GENERAL NOTES

REFERENCE shall be made to Supplemental Specification 3-114 dated Rev. 8-1-57 and to Standard Drawing RB-1-55, dated 3-1-55

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54 and 2-1-55

PILES shall be driven to a minimum bearing capacity of 20 tons for the abutments and 40 tons for the piers.

FIRST PILE TEST LOAD and any subsequent pile test load shall be applied only if directed by the Engineer. All test loads shall be applied where the Engineer shall direct.

WELDED STEEL: The steel for the 36 WF-194 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-7.4(a) of the Construction and Material Specifications) or to A-373.

WELDING: Welds shown as field welds may, at the option of the Contractor, be made in the shop. All welds shall be Class "A" except as shown. Class "B" welds are shown thus: B

SURFACE FINISH OF CONCRETE: Faces of wingwalls and exposed surfaces of piers shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item 5-1.

CONCRETE SLOPE PAVING: The earth bench and the sloped surface of the earth embankment under each end span, in front of the abutment shall be paved from the face of the abutment down to the toe of the slope, and two feet beyond the outer edges of the superstructure.

The paving shall consist of "Item 1-10, Riprap, Type "A", 6" concrete slab" with grooves at approximately 5 to 6 foot centers, running both normal and parallel to the face of the abutment. The grooves shall be placed so that the outer portions will be trapezoids rather than triangles. The grooves shall be 1 1/2" deep, tapering from 3/8" wide at the top to 1/4" wide at the bottom, and neatly filled with cold applied, ready mixed joint and crack sealer meeting the requirements of Sec. M-10.26.

The contract unit price per sq yard bid for this item shall include the entire cost of the riprap, including excavation, concrete, reinforcing steel and crack sealer.

UTILITY LINES: All labor and expense involved in relocating the affected utility lines shall be borne by the respective owners of the lines. The Contractor and owners are requested to cooperate by arranging their work in such a manner that inconvenience to either shall be held to a minimum.

DECK CONSTRUCTION PROCEDURE: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections, between transverse construction joints which are normal to the centerline of bridge and are located near the center of any span.

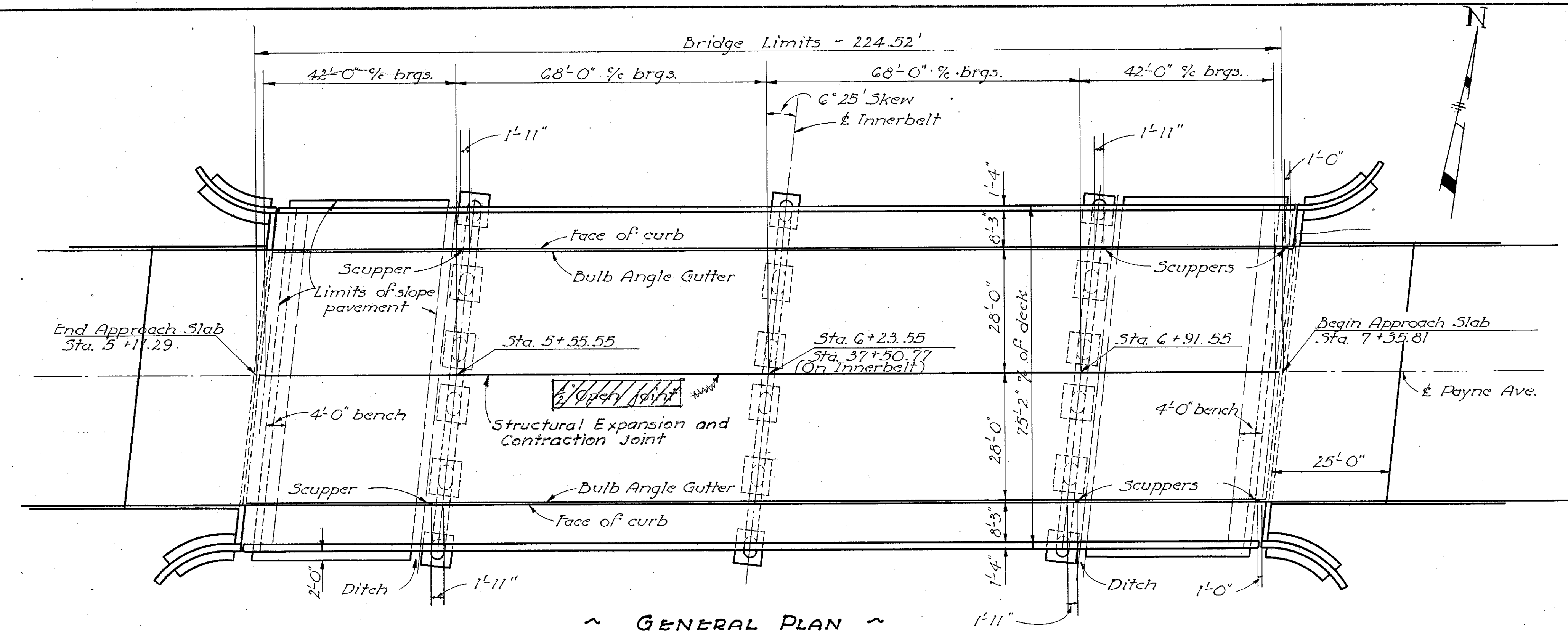
TEMPORARY RUN-AROUND STREET: shall be provided -Width face to face of curbs 36 ft. Width out-to-out of shoulders 54 ft. 5 ft wide sidewalk on North side. Pavement T-70, 9" Portland Cement Concrete, with Type 2A concrete curbs. Sidewalk shall be 4" thick and shall be according to Item I-13, except concrete may be same as pavement concrete. See Sheet No. 34 for additional details.

Revised 1-20-58 CPD

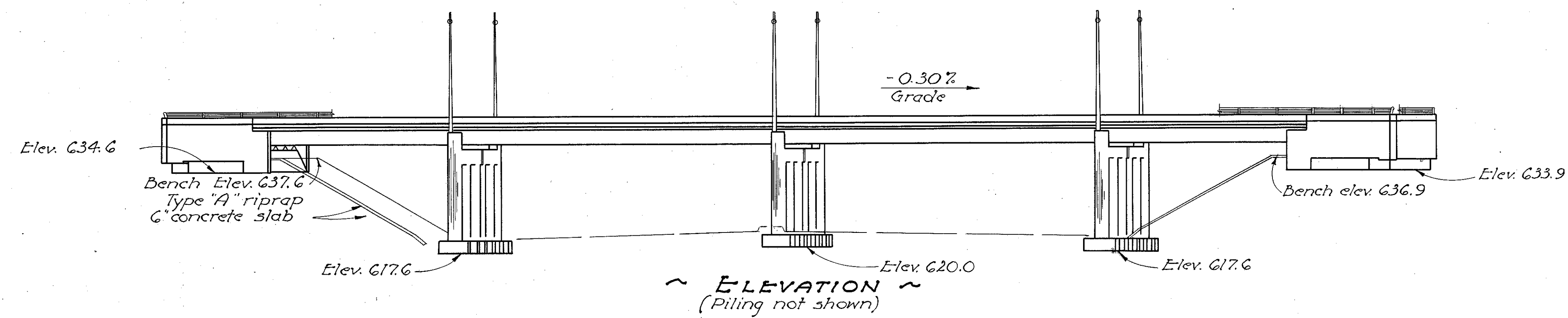
STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

GENERAL PLAN, ELEVATION  
 NOTES & ESTIMATED QUANTITIES  
 BRIDGE No. CUY-42-1952  
 INNERBELT FREEWAY UNDER  
 PAYNE AVENUE  
 CUYAHOGA Co. STA. 37+50.77

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NORRIS	NORRIS	Grassell	CPD	BFG	7-1-57	



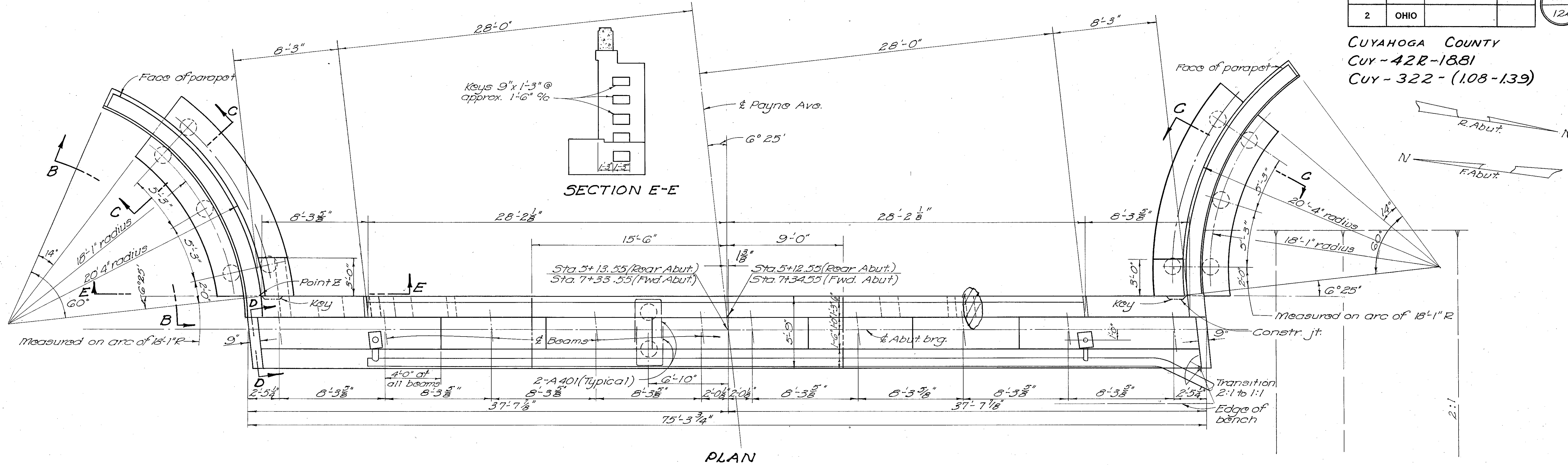
~ GENERAL PLAN ~



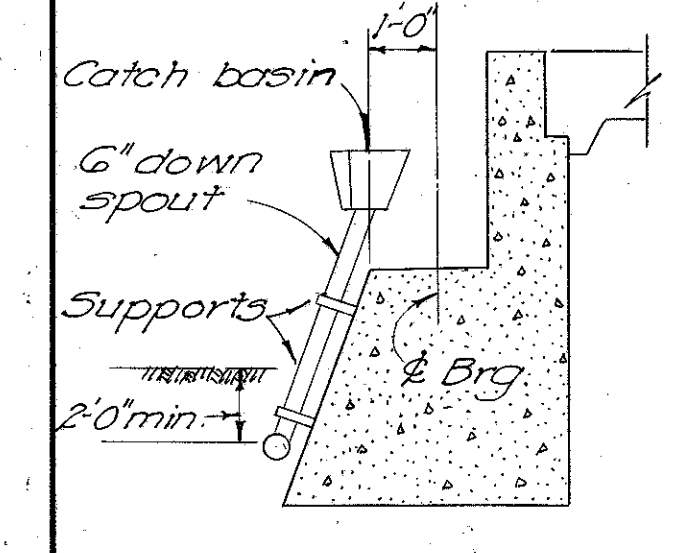
~ ELEVATION ~  
 (Piling not shown)

ESTIMATED QUANTITIES						
Item	Total	Unit	Description	Abut.	Piers	Super. Gen'l.
E-2	763	Cu. Yds.	Unclassified excavation	453	310	
5-1	495	Cu. Yds.	Class "C" concrete, superstructure			495
5-1	244	Cu. Yds.	Class "C" concrete, pier caps & columns		244	
5-1	126	Cu. Yds.	Class "E" concrete, pier footings		126	
5-1	265	Cu. Yds.	Class "E" concrete, abutments, including wings & footings	265		
5-3	1356	Sq. Yds.	Type "C" waterproofing			1356
5-4	230,689	Lbs.	Reinforcing steel	12,792	64,895	152,982
5-7	476,000	Lbs.	Structural steel			476,000
5-8	476,000	Lbs.	Field painting of structural steel			476,000
5-14	531.67	Lin. Ft.	Railing (Aluminum railing and supports and concrete parapet)			531.67
5-15	Lump	Sum	Temporary run-around street			Lump
5-16	Lump	Sum	First test pile			Lump
5-17	Lump	Sum	First pile test load			Lump
5-17	1	Each	Subsequent pile test load			1
5-18	10,920	Lin. Ft.	12" cast-in-place reinforced concrete piles.	1320	9600	
5-25	Lump	Sum	Electric lighting system, as per plan.			Lump
5-25	451	Lin. Ft.	2" electric conduit (Fiber)			451
5-29	440	Lin. Ft.	Subdrainage for wearing surface course			440
5-29	89	Lin. Ft.	6" W.I. or galvanized steel pipe, including specials	14	75	
5-29	202	Lin. Ft.	8" Bituminous coated corrugated metal pipe	72	130	
5-29	76	Cu. Yds.	Porous backfill	76		
F-10	571	Sq. Yds.	Riprap, Type "A", 6" concrete slab			571
F-35	94	Cu. Yds.	Asphaltic concrete surface course, Type "C" (60-70)			94

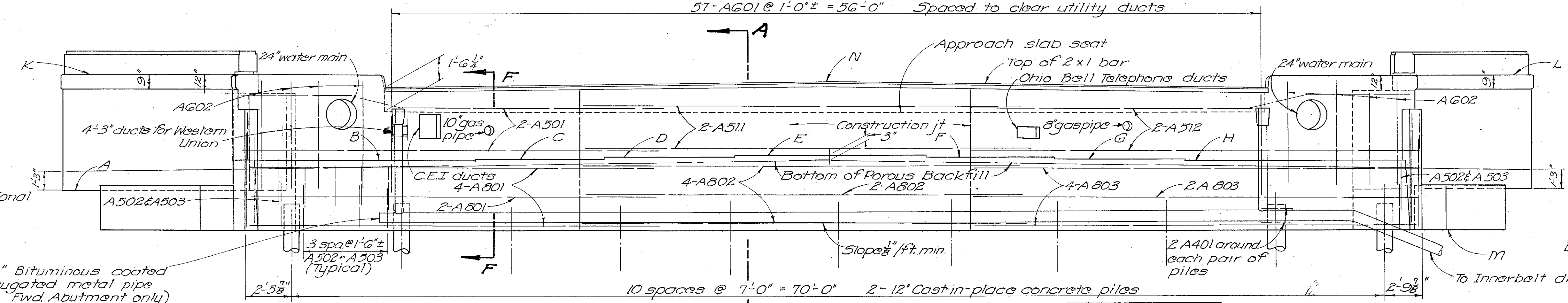
CUYAHOGA COUNTY  
 CUY-42R-1881  
 CUY-322-(108-139)



PLAN



SECTION F-F

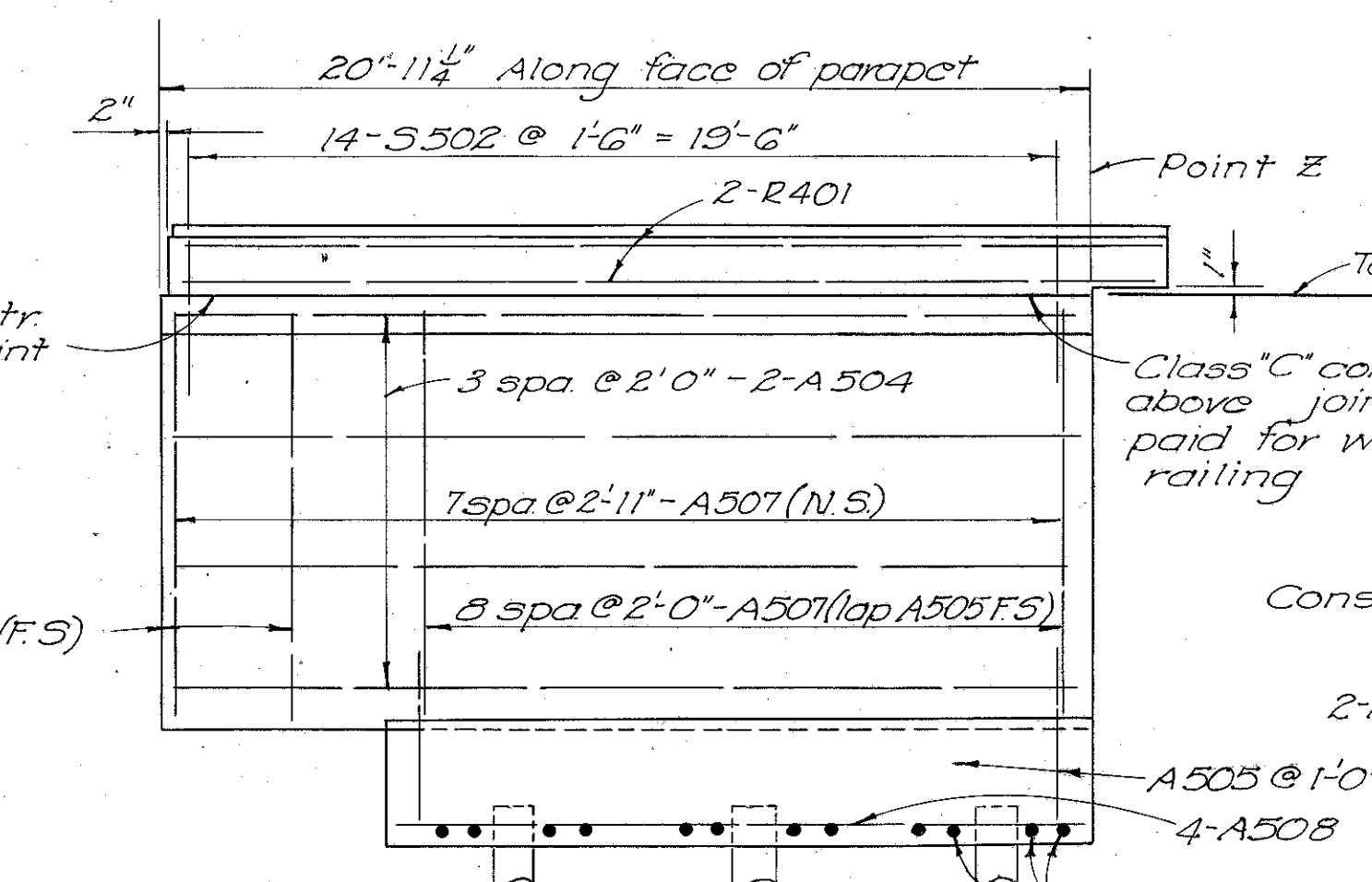


ELEVATION AT FORWARD ABUTMENT  
 (Rear abutment the same except opposite hand and no downspouts)

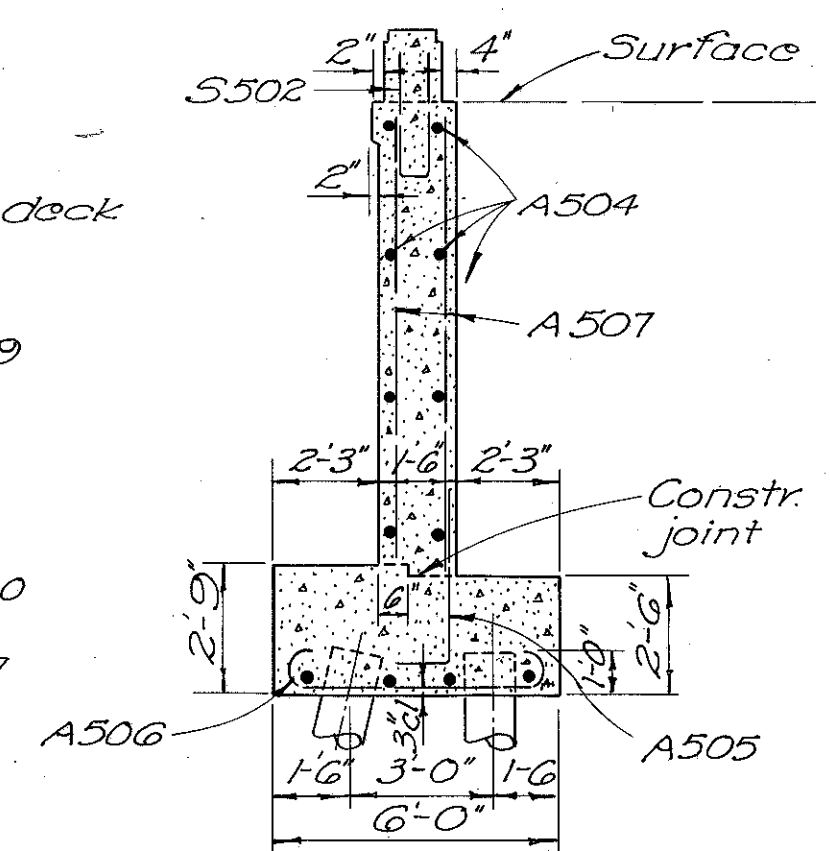
ELEVATIONS		
R. Abut.	F. Abut.	
A	637.10	636.4
B	639.60	638.92
C	639.73	639.05
D	639.85	639.19
E	639.98	639.32
F	639.85	639.19
G	639.71	639.07
H	639.58	638.94
K	645.11	644.41
L	645.09	644.43
M	634.6	633.9
N	644.80	644.14

NOTES:  
 Backwall concrete shall not be placed until all utility ducts carried on superstructure are installed. The duct owners will provide suitable protective expansive material around ducts thru backwall. This material may be sponge rubber, cork or any commercial joint filler judged by the Engineer to be at least the equivalent of 1" of preformed expansion joint filler described in Sec 171-10.01.  
 Porous backfill full length of the abutment and wings, shall extend to the underside of the approach slab and sidewalks or the finished ground surface and outward to the surface of the embankment slope. Excavation therefor, in excess of that required for construction of the abutments, shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.

SECTION A-A



SECTION D-D



SECTION G-G

(All wings have same reinforcing)

Revised 9/3/57  
 RHN  
 Revised 1-31-58 RHN

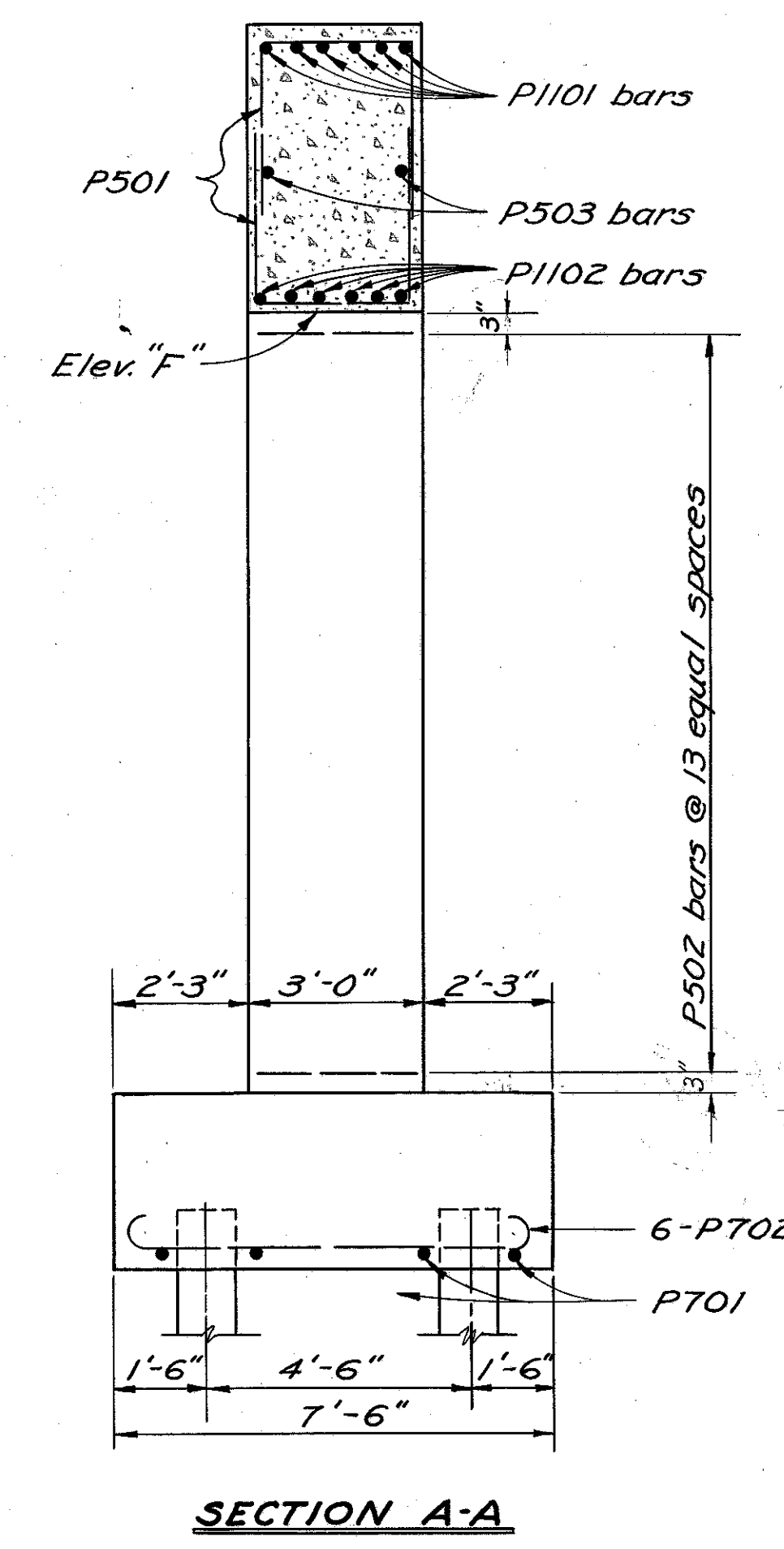
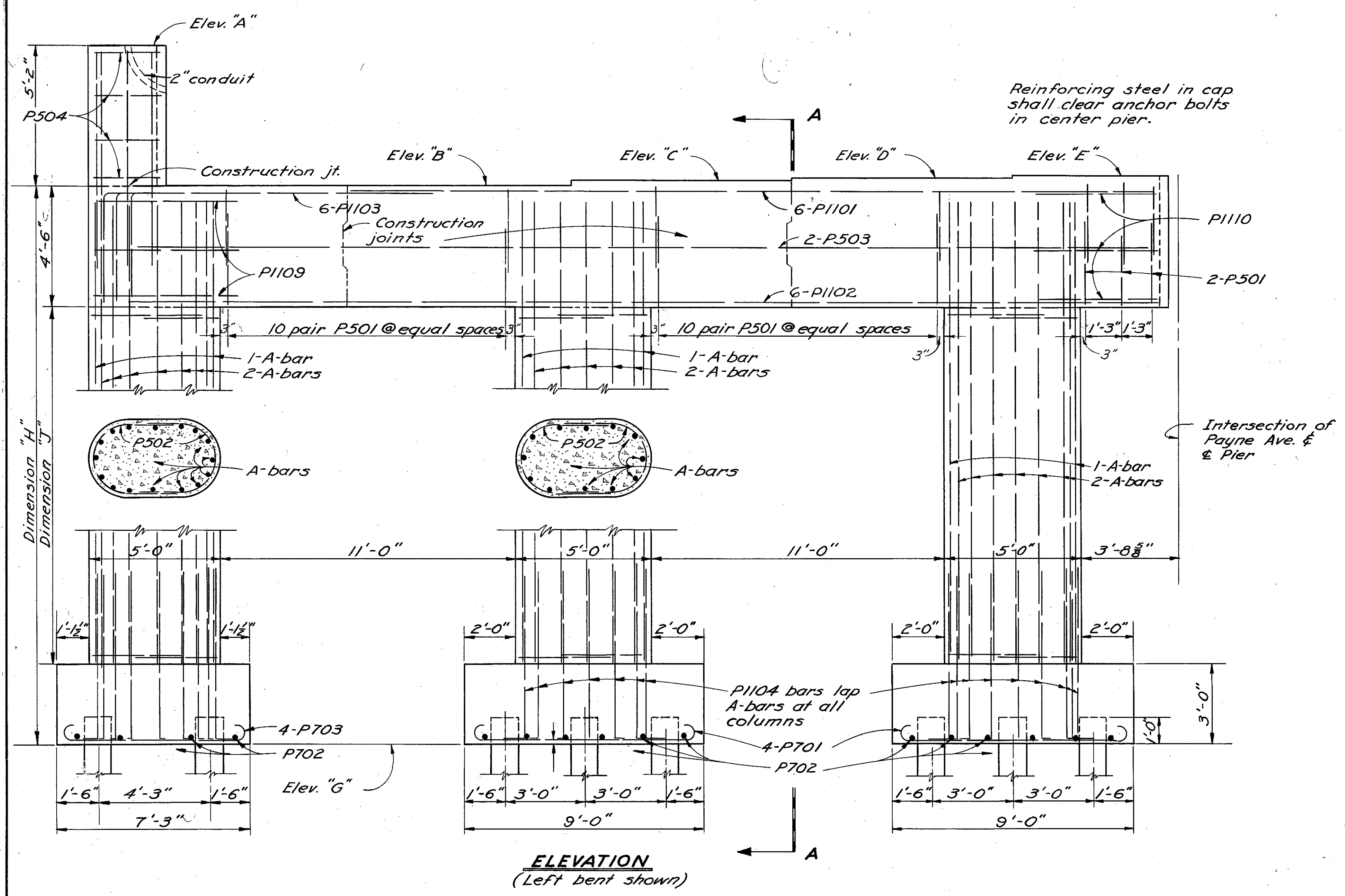
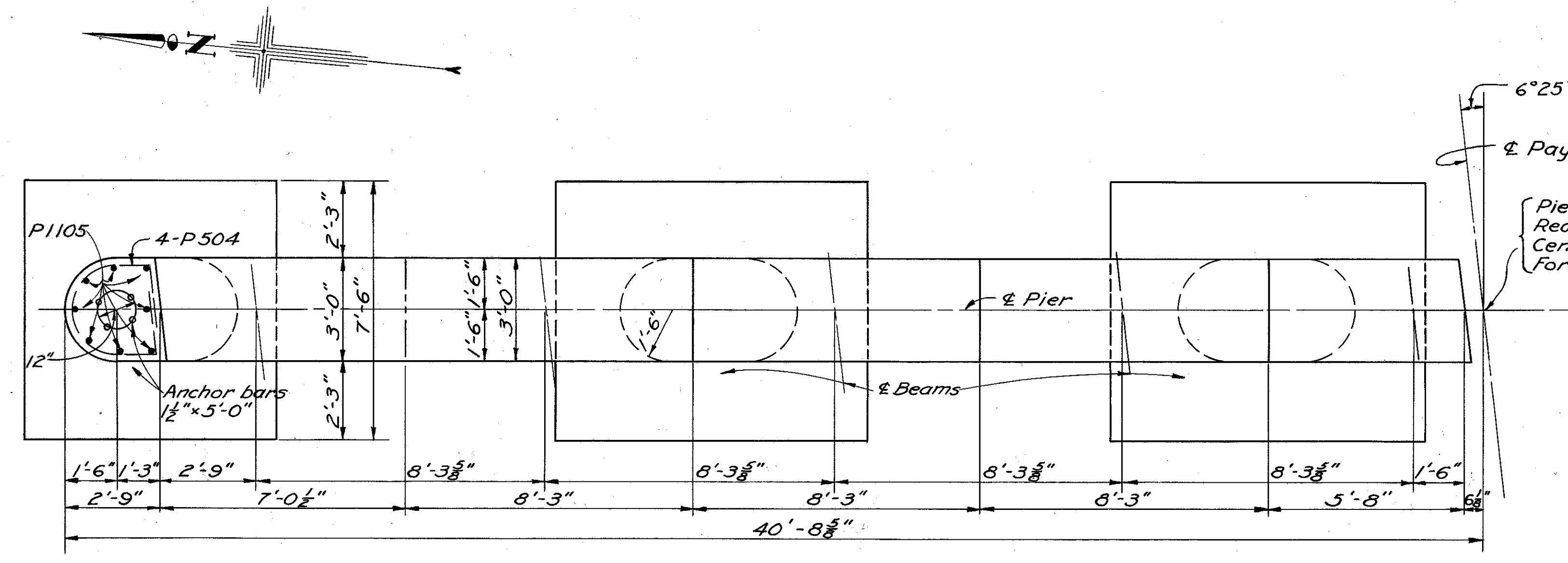
STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

ABUTMENT DETAILS  
 BRIDGE No. CUY-42-1952  
 INNERBELT FREEWAY UNDER  
 PAYNE AVENUE

CUYAHOGA COUNTY STA. 37+50.77

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NORRIS	NORRIS	RHD	CPD	BFG	9-2-57	7-1-57

CUYAHOGA COUNTY  
 CUY-42R-18.81  
 CUY-322-(108-139)



Elev. or Dimension	Rear Pier		Center Pier		Forward Pier	
	Left Bent	Right Bent	Left Bent	Right Bent	Left Bent	Right Bent
A	644.20	643.22	643.90	643.92	643.79	643.81
B	639.03	639.05	638.73	638.75	638.62	638.64
C	639.16	639.18	638.86	638.88	638.75	638.77
D	639.30	639.30	639.00	639.00	638.89	638.89
E	639.43	639.43	639.13	639.13	639.02	639.02
F	634.53	634.55	634.23	634.25	634.12	634.14
G	617.6	617.6	620.0	620.0	617.6	617.6
H	21'-5 3/8"	21'-5 3/8"	18'-8 3/4"	18'-9"	21'-0 1/2"	21'-0 1/2"
J	13'-11 1/2"	13'-11 1/2"	11'-2 3/4"	11'-3"	13'-6 1/2"	13'-6 1/2"

BAR SCHEDULE FOR COLUMNS

	R. Pier	C. Pier	F. Pier
A-Bar	P1106	P1107	P1108

For details of electrical grounds see Sheet No 99A.

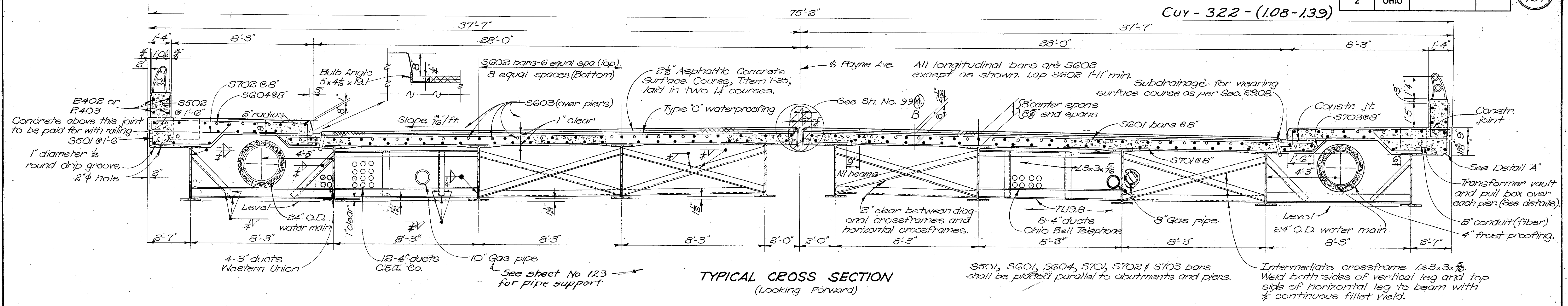
STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

**PIER DETAILS**  
 BRIDGE No. CUY-42-1952  
 INNERBELT FREEWAY UNDER  
 PAYNE AVENUE

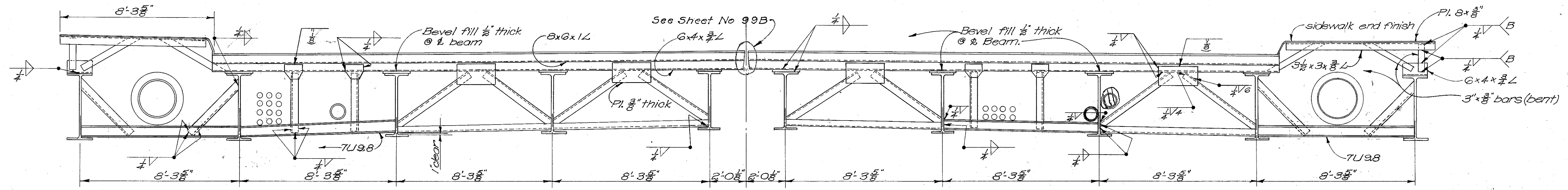
CUYAHOGA COUNTY STA. 37+50.77

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GORRIS	NORRIS	J&W	CPD	BFG	7-1-57	

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

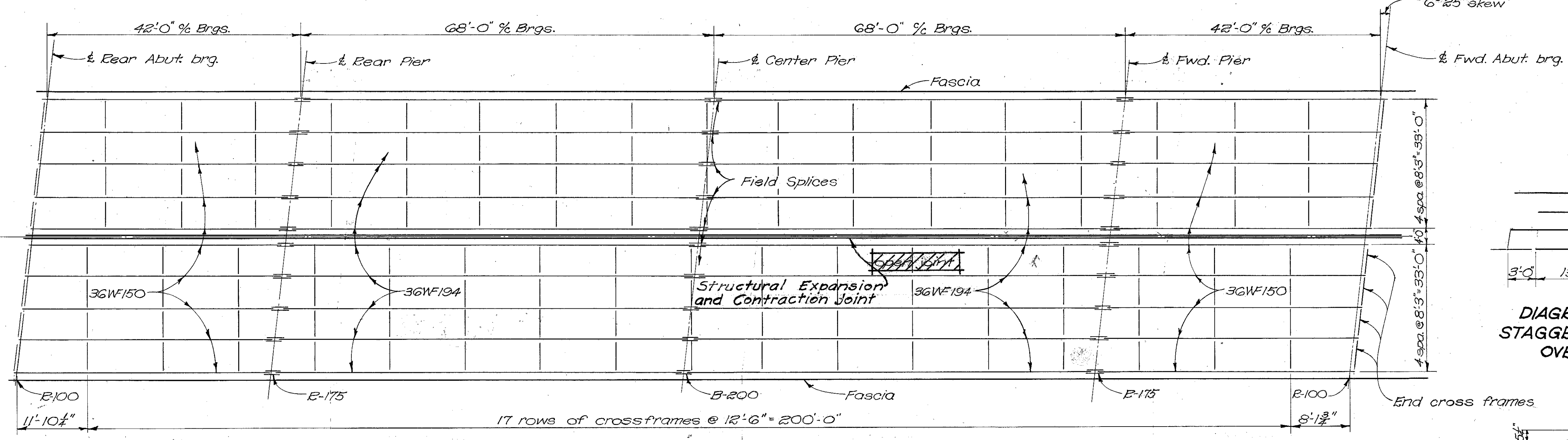


TYPICAL CROSS SECTION  
(Looking Forward)

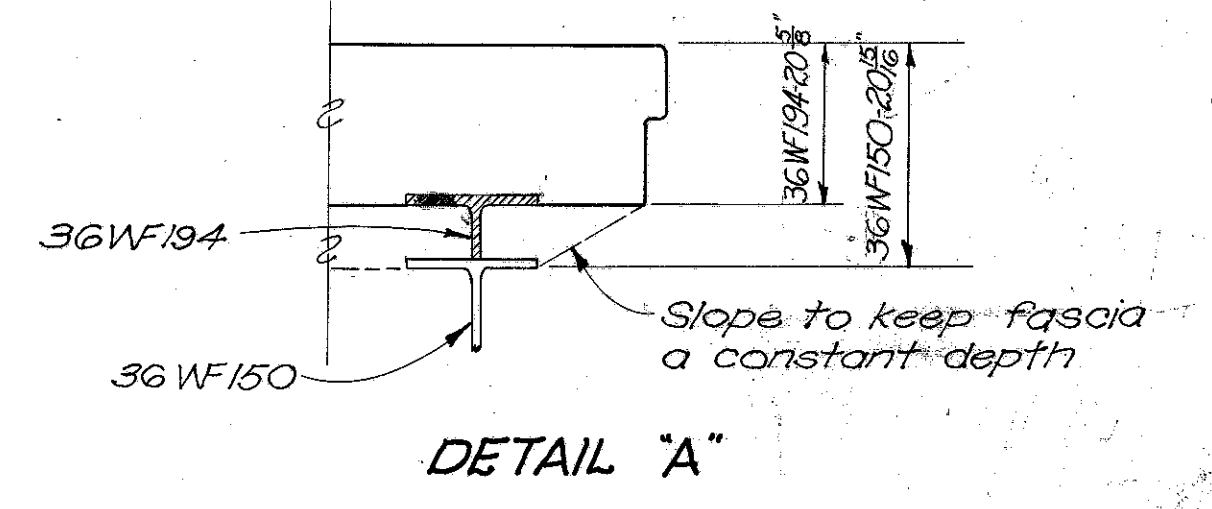


END FINISH DETAILS AT REAR ABUTMENT  
 All end crossframe Ls are 4x4x 3/8"  
 (End finish details are opposite hand at Fwd. Abut.)

For details of water main support see Sh. No. 115

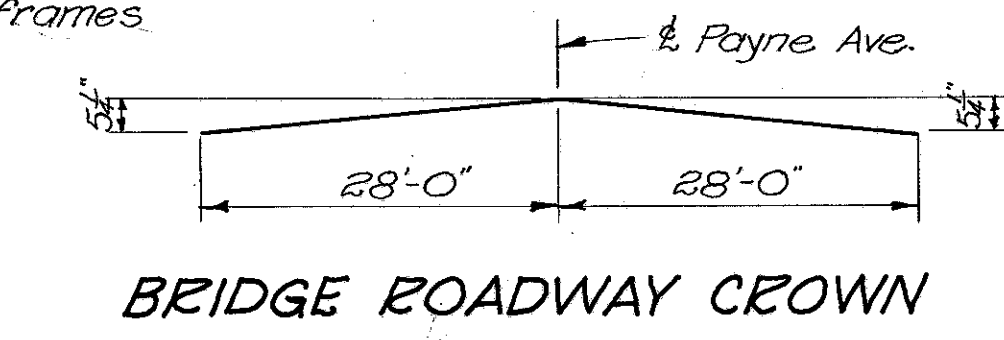


STEEL FRAMING PLAN  
 (For details of Bookers & Bolsters see Std. Drwg. EB-1-55.)



DETAIL A

DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS



DEFLECTIONS  
 Dead load deflections are 1/8" for interior beams and 3/8" for exterior beams.

Revised 9/3/57  
 RHN  
 Revised 1-20-58 CPD  
 Revised 1-31-58 RHN

STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

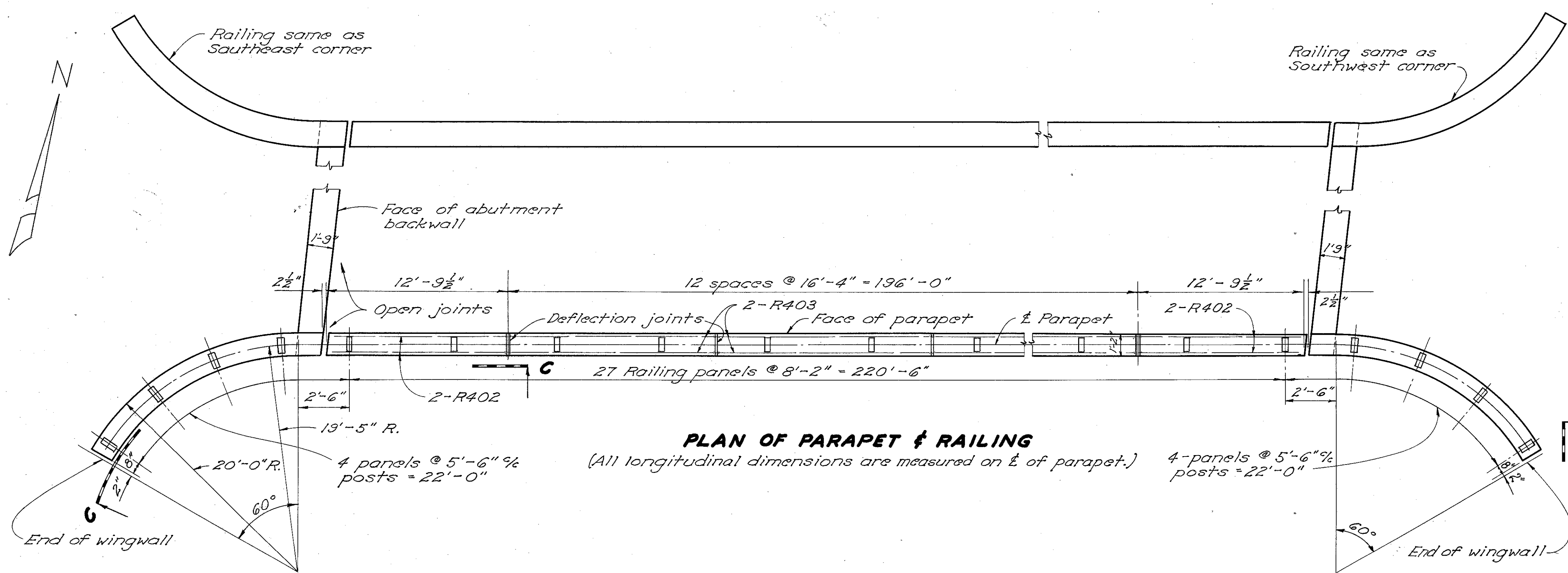
**SUPERSTRUCTURE DETAILS**  
 BRIDGE No. CUY-42-1952  
 INNERBELT FREEWAY UNDER  
 PAYNE AVENUE

CUYAHOGA COUNTY STA. 37+50.77

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NORRIS	NORRIS	RD	CPD	BFG	9.1.57	7-1-57

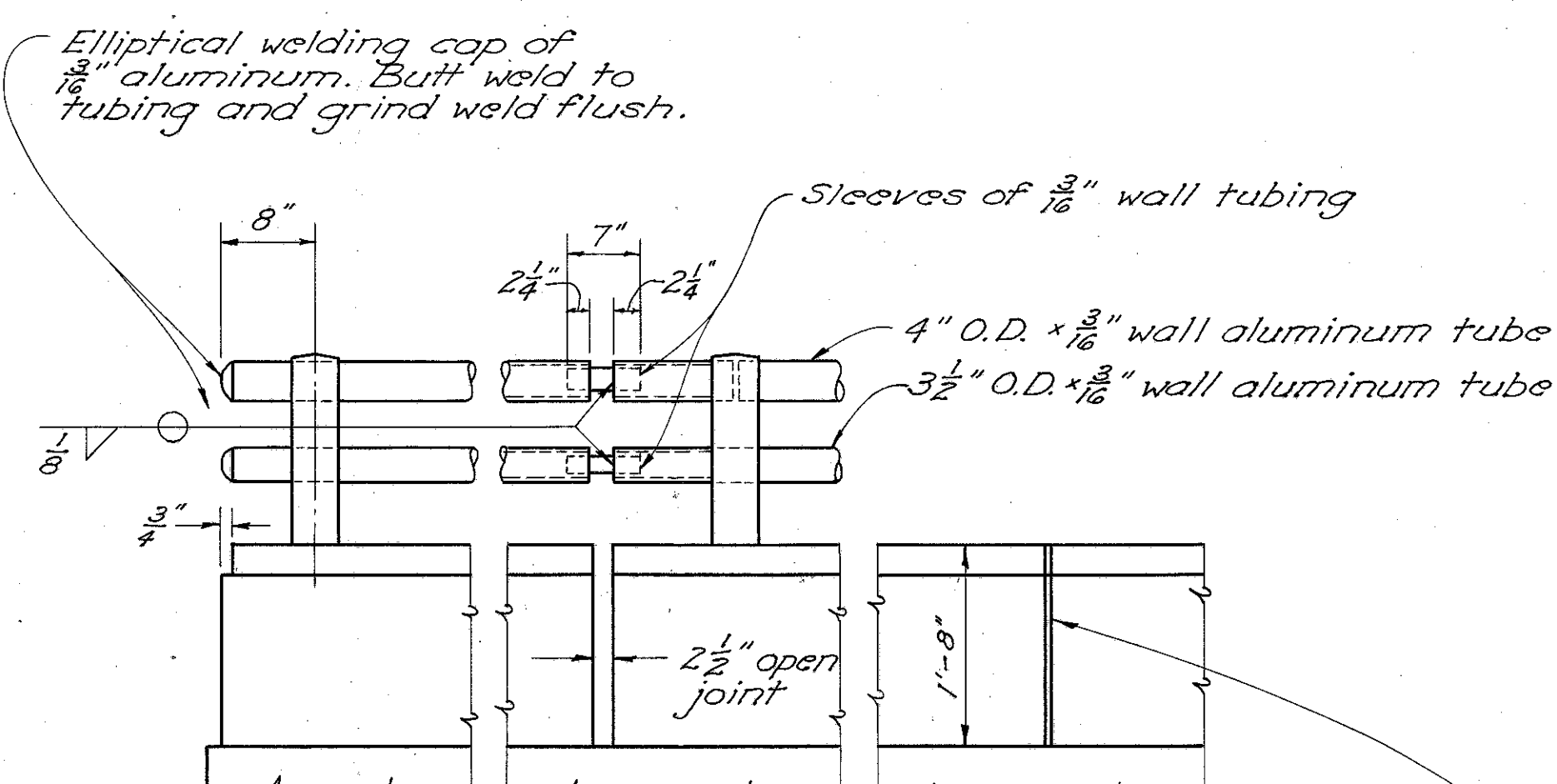
FED. RD. DIVISION	STATE	PROJECT	114
2	OHIO		124

CUYAHOGA COUNTY  
 CUY-42R-1881  
 CUY-322-(108-139)

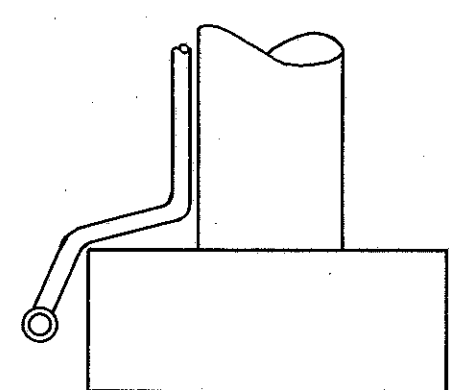


**PLAN OF PARAPET & RAILING**

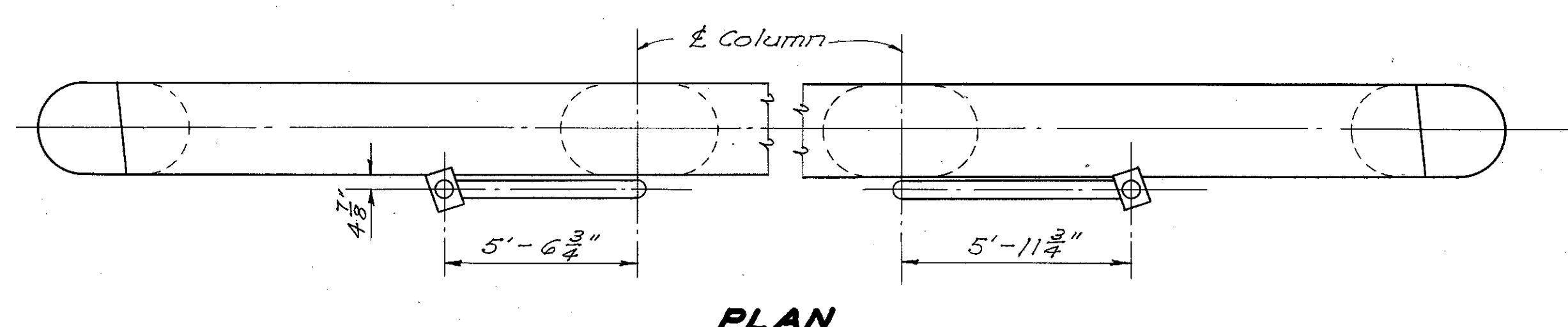
(All longitudinal dimensions are measured on E of parapet.)



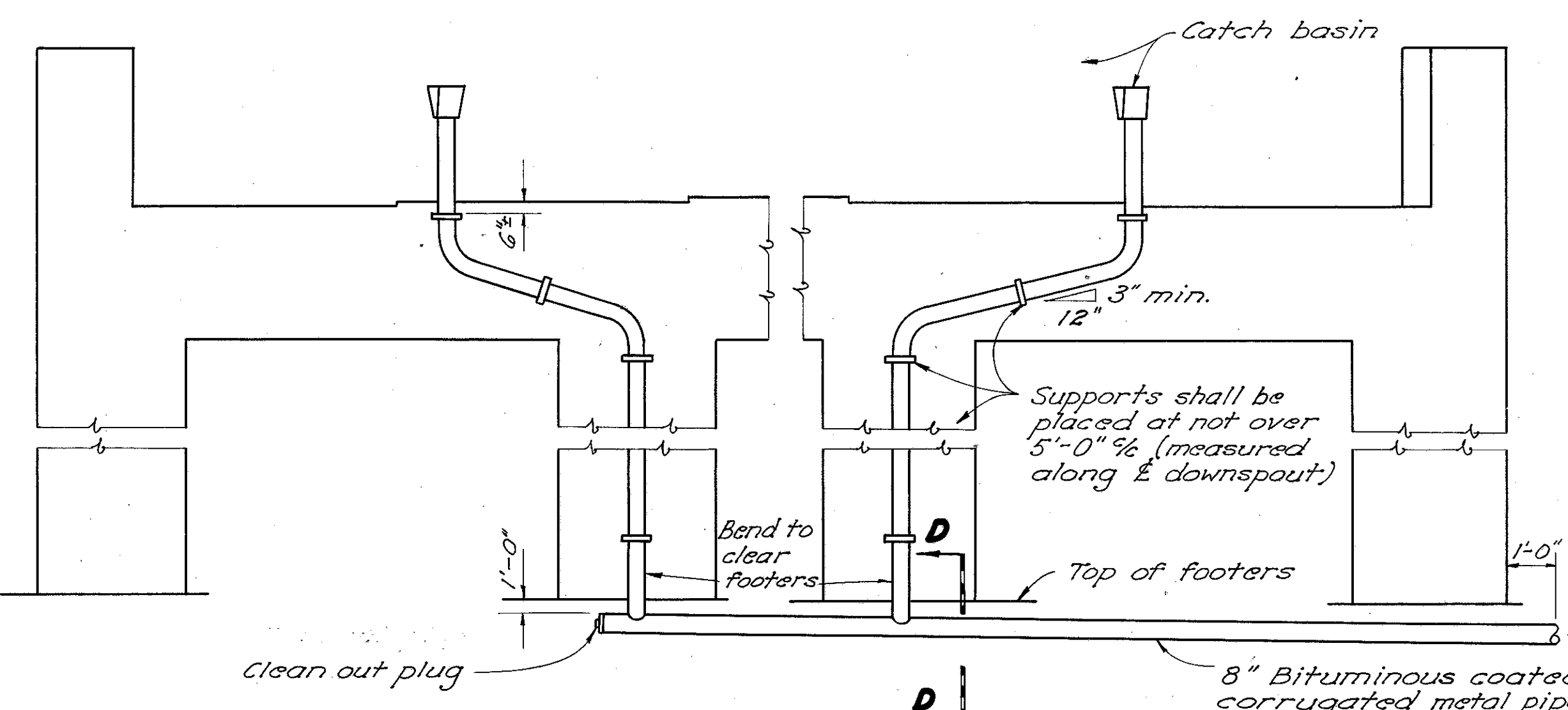
**PART ELEVATION OF PARAPET & RAILING VIEW C-C**



**SECTION D-D**

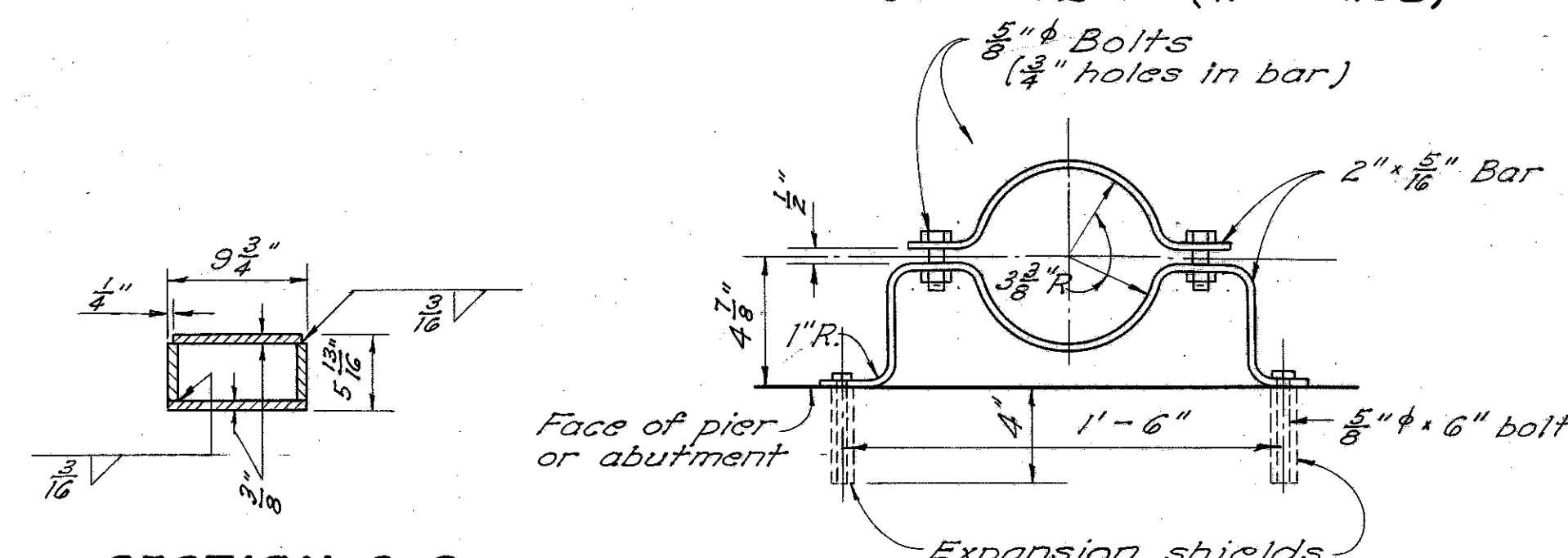


**PLAN**



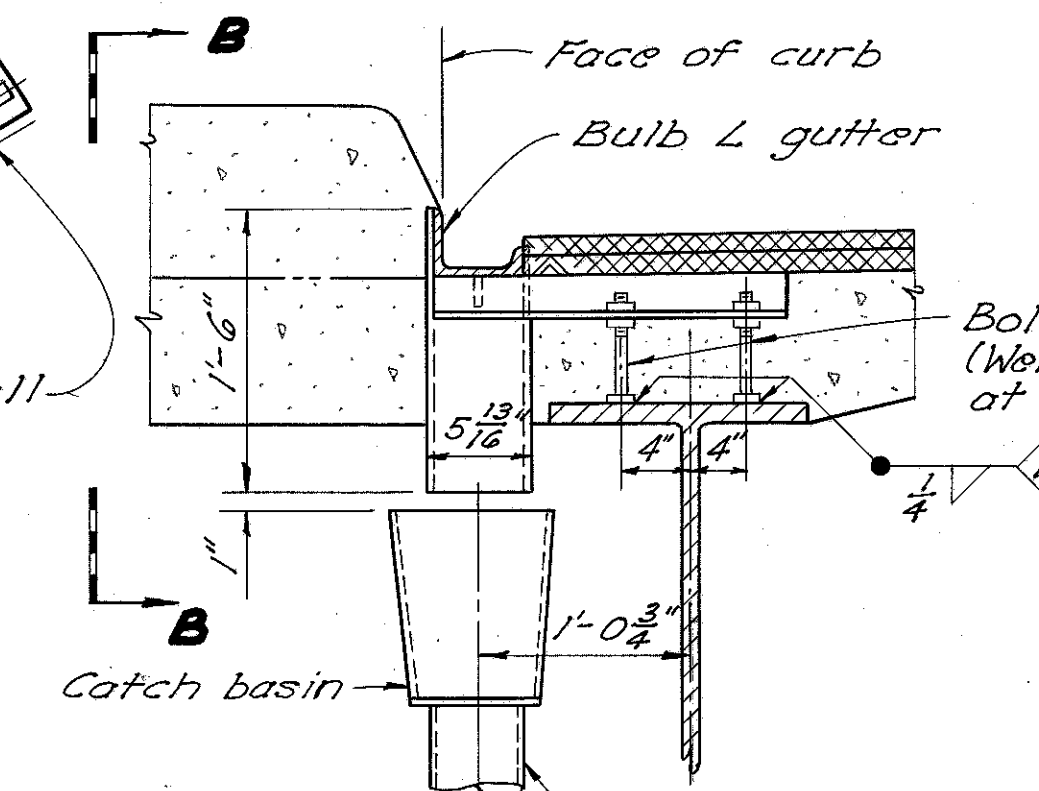
**ELEVATION**

(Rear Pier looking east - Fwd. Pier looking west)

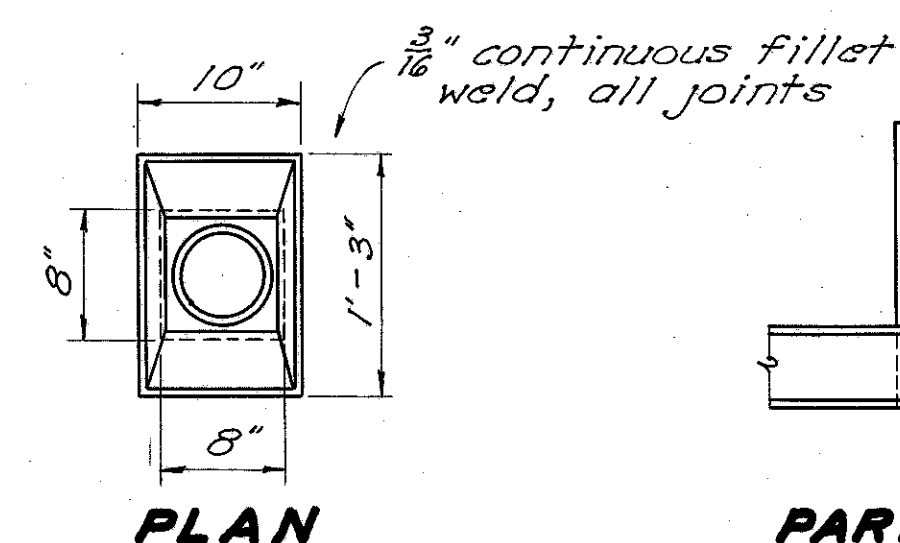


**SECTION C-C**

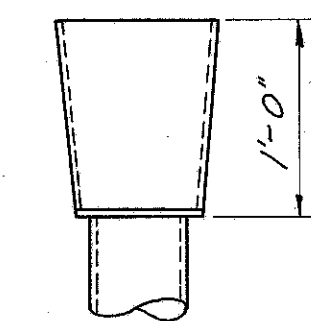
**DOWNSPOUT SUPPORT DETAILS (Pipe Special)**



**SECTION AT SCUPPER**

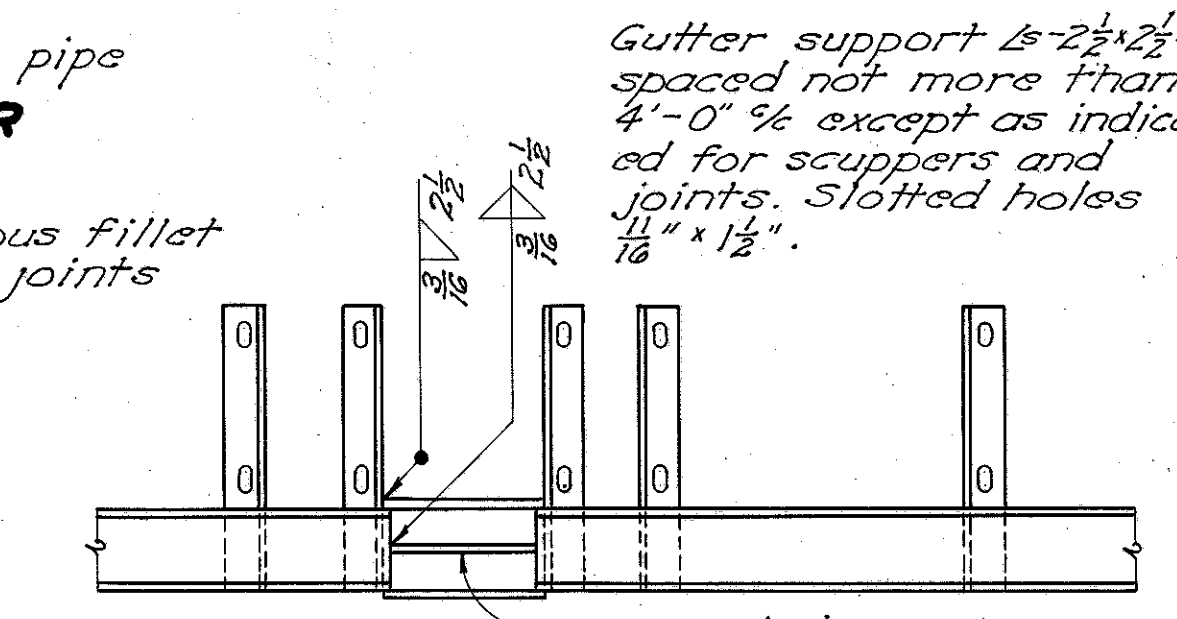


**PLAN**

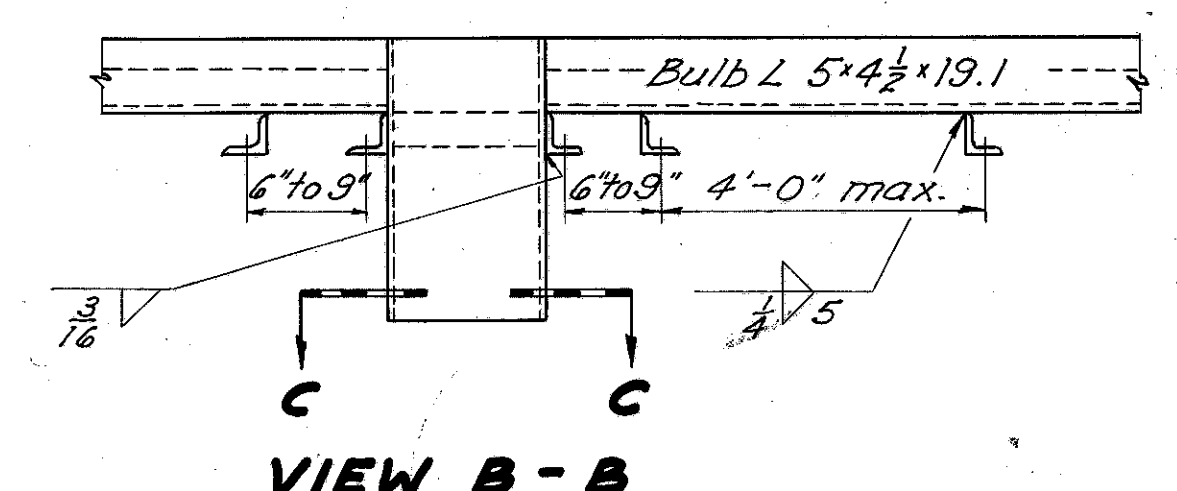


**CATCH BASIN DETAILS (Pipe Special)**

**DOWNSPOUTS AND PIPE SPECIALS:** Downspouts shall be 6" standard wrought iron or hot-dip galvanized pipe. Joints shall be made by welding or by Vitaulic couplings or approved equivalent. Pipe specials shall be wrought iron or hot-dip galvanized steel. Any welding shall be done prior to galvanizing.



**PART PLAN OF GUTTER & SCUPPER**



**VIEW B-B**

STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

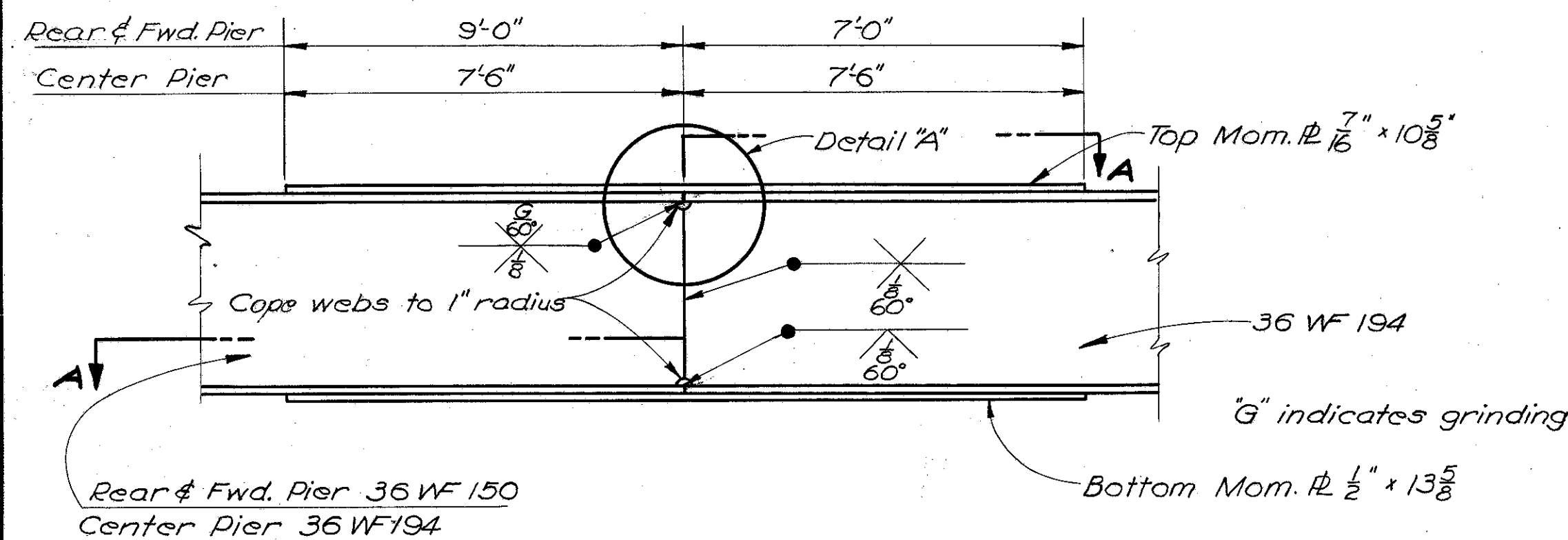
**RAILING AND DRAINAGE DETAILS**

BRIDGE No. CUY-42-1952  
 Innerbelt Freeway Under  
 Payne Avenue

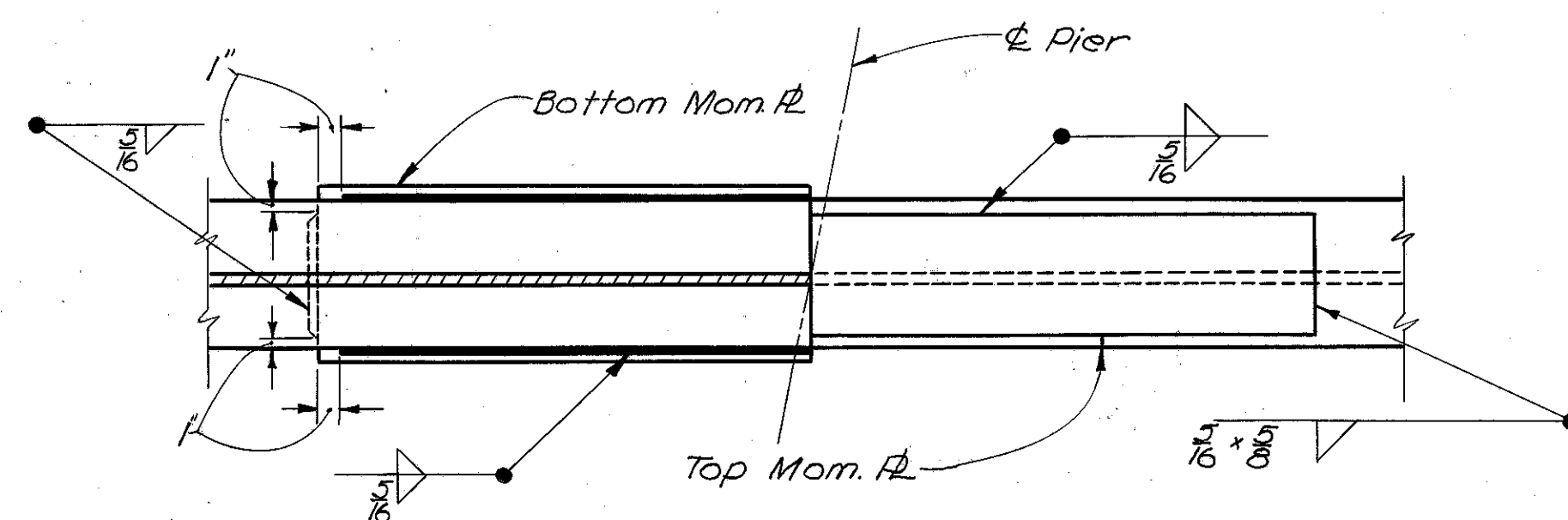
Cuyahoga County Sta. 37+50.77

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NORRIS	NORRIS	prose	CPD	DFG	7-1-57	

CUYAHOGA COUNTY  
Cuy - 42R-1881  
Cuy - 322 - (108-139)



**BEAM SPLICE DETAILS**

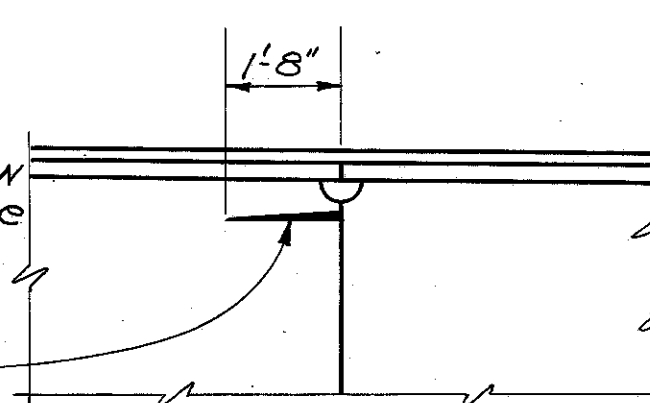


**SECTION A-A**

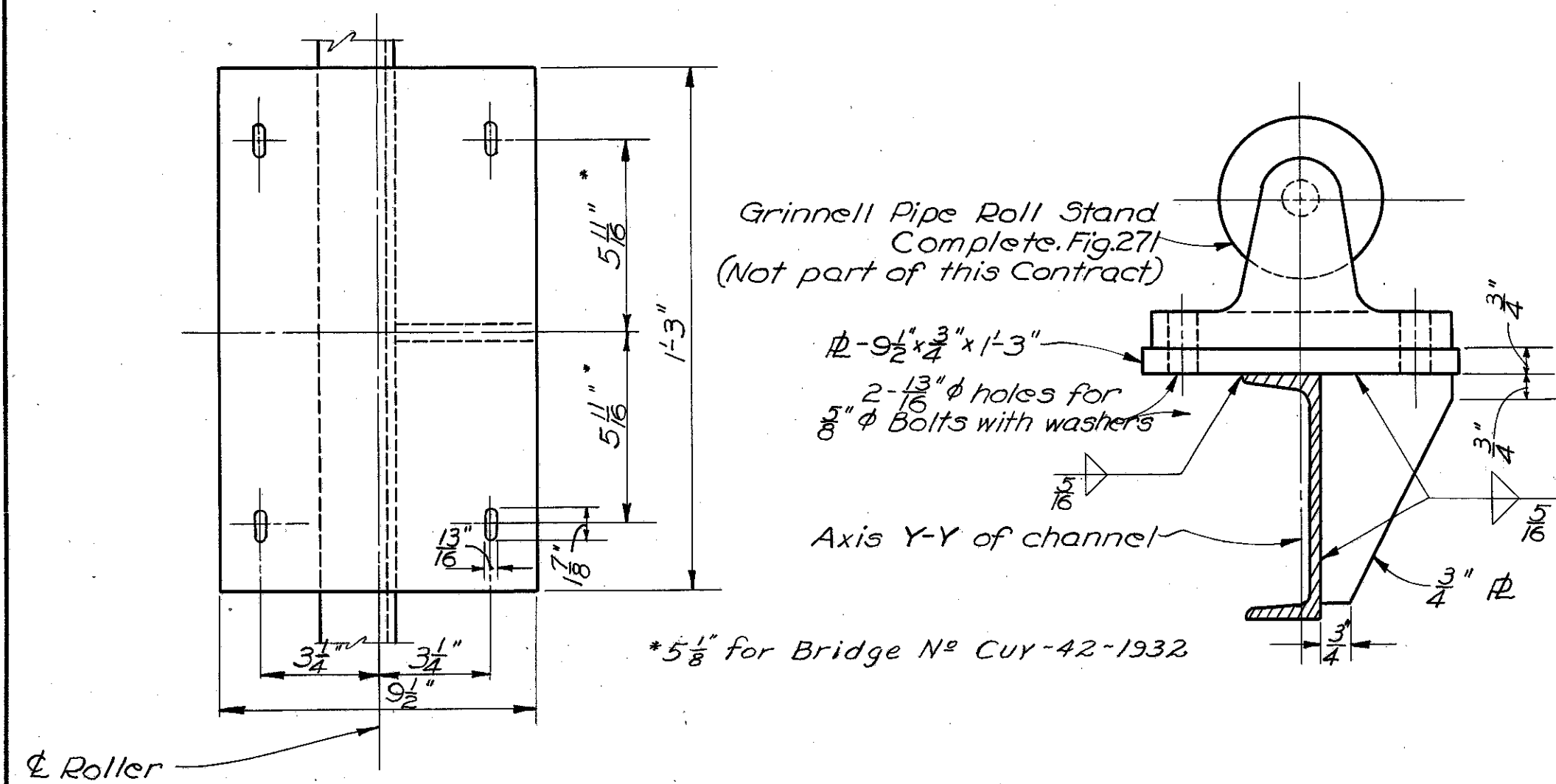
**BEAM SPLICE WELDING PROCEDURE**

1. Raise end of beam 1/8" at 2<sup>nd</sup> pier (Or 1/4" at abutment).
2. Butt-weld the beam flanges and web at 1<sup>st</sup> pier using the following sequence: make one pass on each flange, then one on the web, repeat until welds are completed.
3. Weld bottom & top moment plates.
4. Lower end of beam @ 2<sup>nd</sup> pier or abutment
5. Make splice at 2<sup>nd</sup> & 3<sup>rd</sup> pier in the same manner, raising beam 1/8" at 3<sup>rd</sup> pier and 1/4" at abutment.

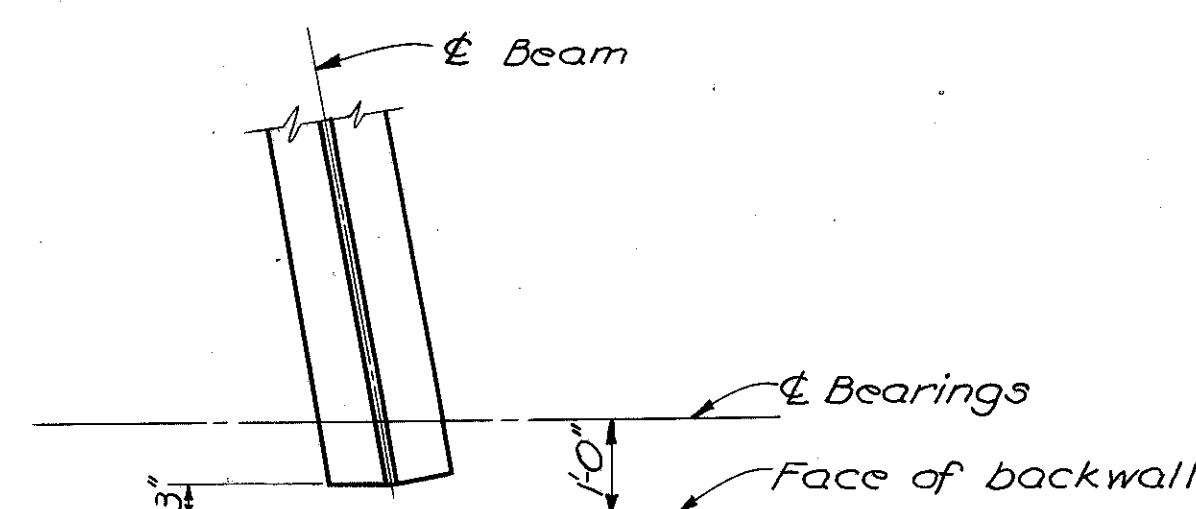
Cut web of 36 WF 150 2" below bottom of top flange. Slope up at rate of 5/8" in 4" to same depth as 36 WF 194. Fill opening with weld.



**DETAIL "A"**



**DETAILS OF WATER PIPE SUPPORT ON CROSS FRAMES**



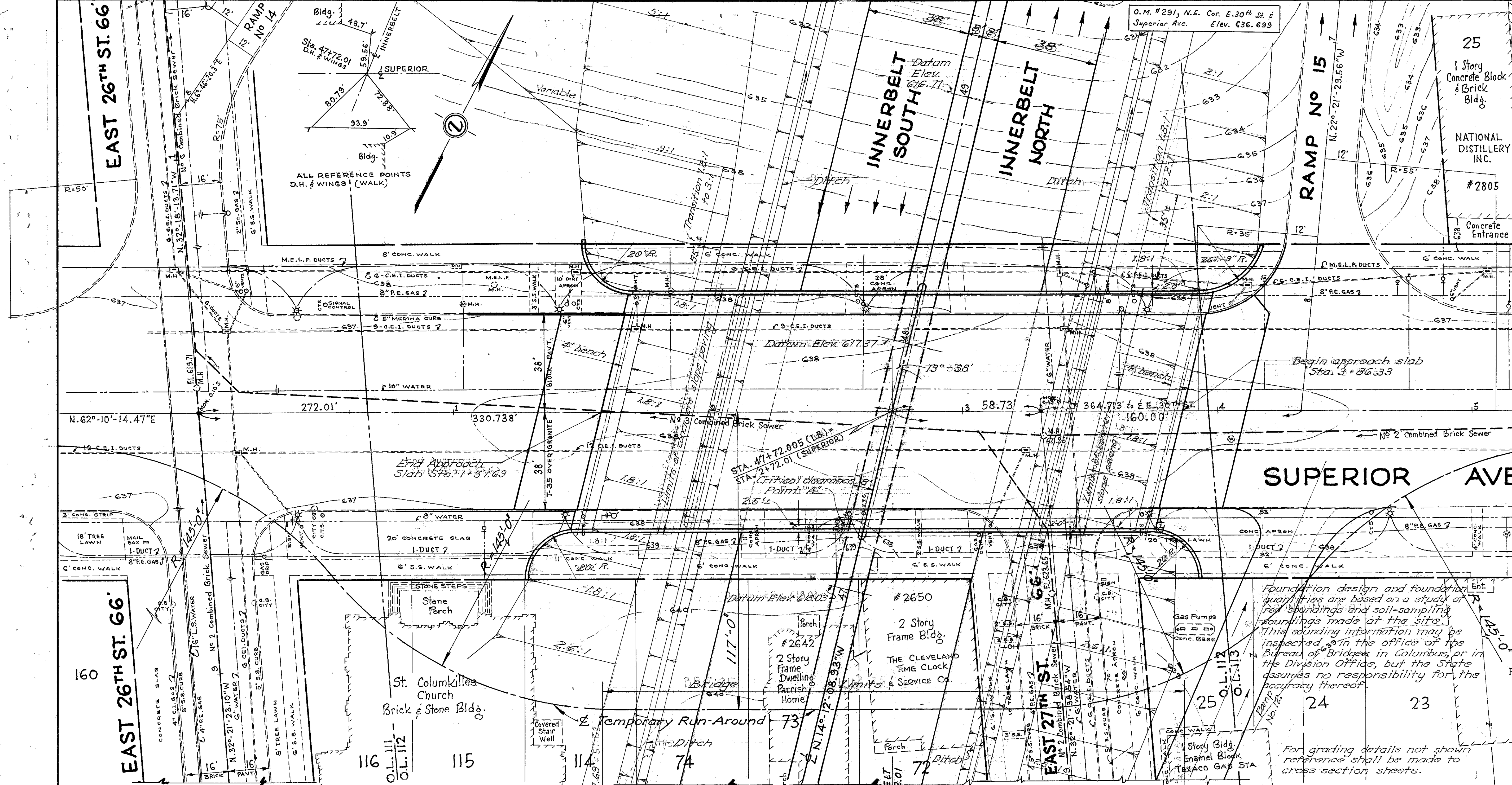
**DETAILS OF END OF BEAM**  
(Showing beam cut-off)

SUPERSTRUCTURE				ABUTMENTS (CONT)			
Mark. No.	Length	Weight	Shp	Mark. No.	Length	Weight	Shp
3701	664	29'-2"	39,586 S	A803	20	28'-2"	1,504 S
3702	664	9'-0"	12,215 S	A601	114	14'-8"	2,511 B
3703	664	5'-3"	7,125 B	A602	16	14'-11"	359 B
3601	664	29'-10"	29,754 B	A501	8	23'-11"	200 S
3602	720	38'-6"	41,635 S	A502	84	10'-3"	898 B
3603	156	30'-0"	7,029 S	A503	84	11'-9"	1,029 B
3604	664	11'-8"	11,636 B	A504	32	20'-6"	684 B
3501	296	6'-11"	2,136 B	A505	68	4'-7"	325 B
3502	352	5'-1"	1,866 B	A506	48	6'-10"	342 B
<b>RAILING</b>				<b>REPLACEMENT BARS</b>			
R401	16	22'-0"	- B	RE11	3	7'-6"	- S
R402	16	12'-6"	- S	RE8	1	6'-6"	- S
R403	96	16'-0"	- S	RE7	4	6'-2"	- S
* To be paid for with railing, Item S-14.				RE6	5	5'-10"	- S
<b>PIERS</b>				RE5	1	5'-7"	- S
P1101	36	30'-0"	5,738 S	RE4	1	5'-3"	- S
P1102	36	38'-6"	7,364 S	<b>REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.</b>			
P1103	36	16'-8"	3,188 B	<b>BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A700 is a No. 7 size bar and A1014 is a No. 10 size.</b>			
P1104	264	7'-5"	10,403 B	<b>REINFORCING STEEL LIST</b>			
P1105	48	8'-9"	2,231 S	<b>Bending Diagrams</b>			
P1106	88	17'-9"	8,299 S	<b>REINFORCING STEEL LIST</b>			
P1107	88	15'-1"	7,052 S	<b>Bending Diagrams</b>			
P1108	88	17'-5"	8,143 S	<b>REINFORCING STEEL LIST</b>			
P1109	18	11'-6"	1,100 B	<b>Bending Diagrams</b>			
P1110	18	9'-4"	893 B	<b>REINFORCING STEEL LIST</b>			
<b>ABUTMENTS</b>				<b>REINFORCING STEEL LIST</b>			
P701	48	10'-2"	997 B	<b>Bending Diagrams</b>			
P702	96	8'-8"	1,701 B	<b>REINFORCING STEEL LIST</b>			
P703	24	8'-5"	413 B	<b>Bending Diagrams</b>			
P501	276	8'-9"	2,519 B	<b>REINFORCING STEEL LIST</b>			
P502	504	7'-10"	4,118 B	<b>Bending Diagrams</b>			
P503	12	38'-6"	482 S	<b>REINFORCING STEEL LIST</b>			
P504	24	10'-2"	254 B	<b>Bending Diagrams</b>			
A801	20	24'-10"	1,326 S	<b>REINFORCING STEEL LIST</b>			
A802	20	27'-0"	1,442 S	<b>Bending Diagrams</b>			

**CUYAHOGA COUNTY**  
**Sec. CUY-42R-18.81**  
**In Cleveland**  
**CUY-322-(1.08-1.39)**

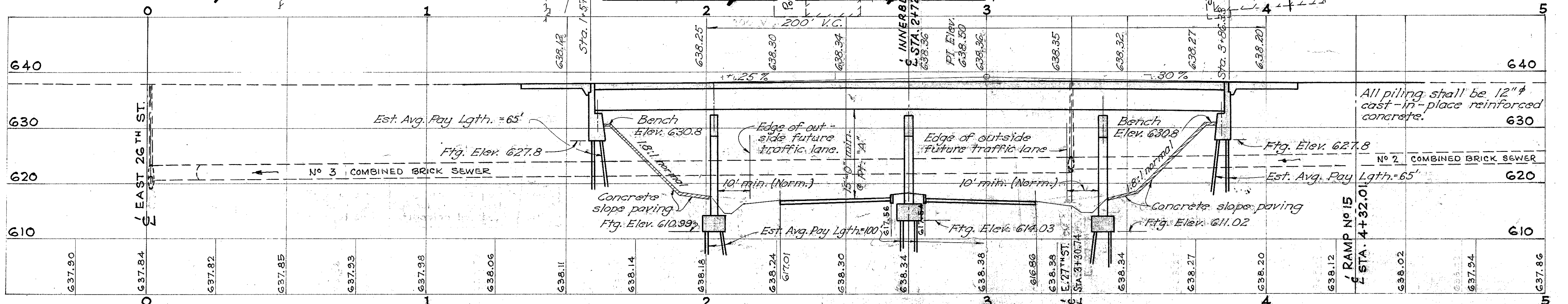
25	23	22
1 Story Concrete Block & Brick Bldg.	Concrete Block Warehouse	2 Story Brick Bldg.

NATIONAL DISTILLERY INC. #2805  
 THE GENERAL CABLE CO. #2875



Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the Division Office, but the State assumes no responsibility for the accuracy thereof.

For grading details not shown reference shall be made to cross section sheets.



**PROPOSED STRUCTURE**  
 TYPE: Continuous steel beams with reinf. concrete deck and reinf. concrete substructure.  
 SPAN: 42'-70'-70'-42' on bearings.  
 ROADWAY: 76'  $\frac{1}{4}$  curbs.  
 SIDEWALKS: 2 @ 8'-0"  
 LOAD FREQUENCY: CF=2000 (51).  
 SKEW: 13°-38' L.F.  
 WEARING SURFACE: Bituminous.  
 APPROACH SLABS: 45'-1-54' (25' long)  
 ALIGNMENT: Tangent.

STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 BUREAU OF BRIDGES

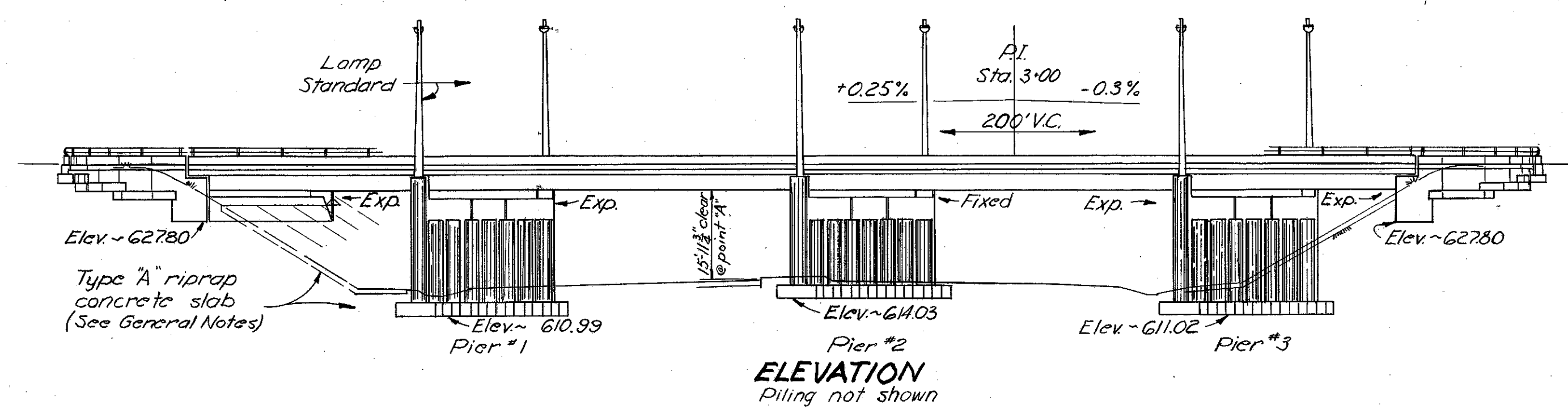
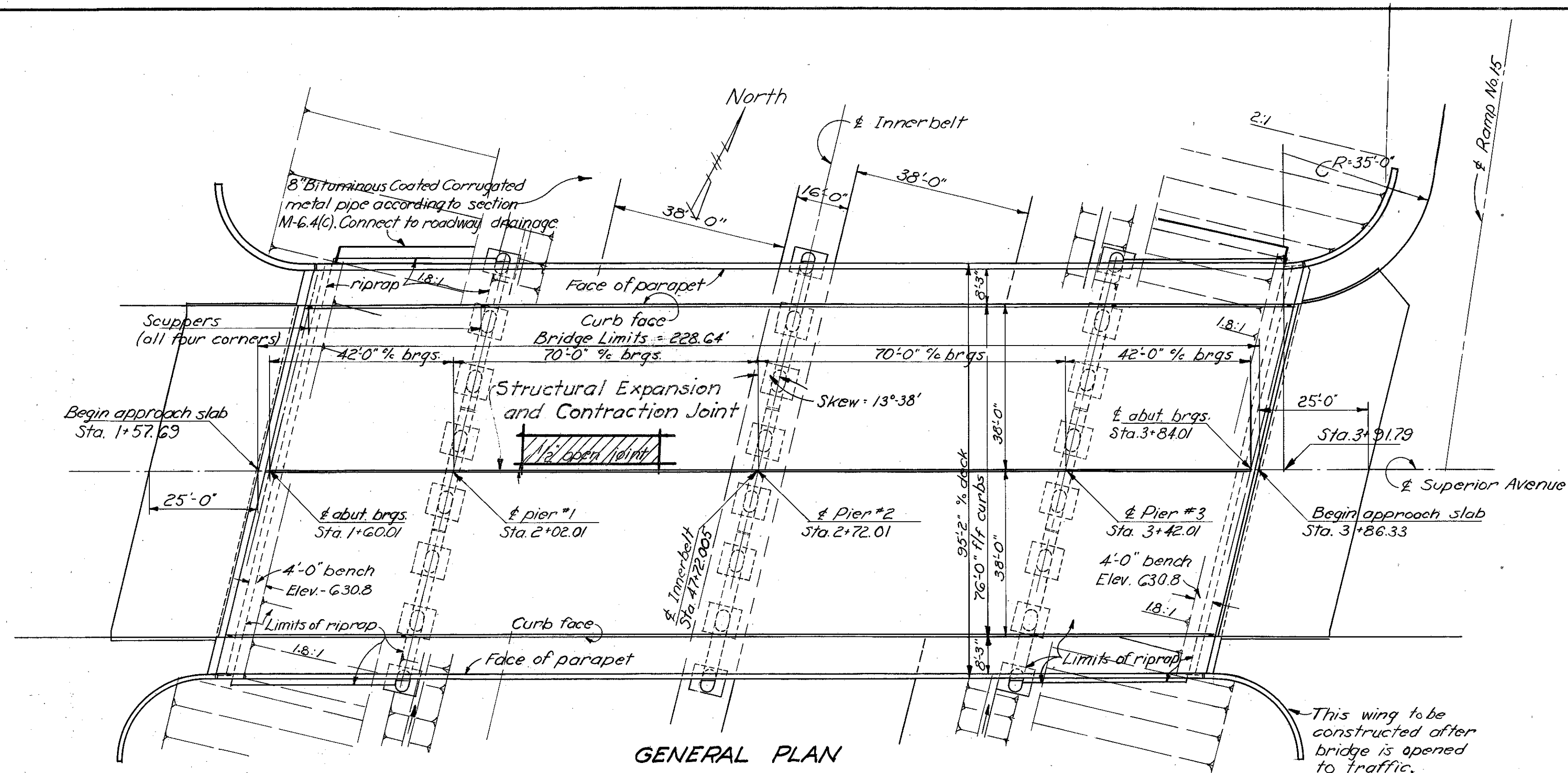
**SITE PLAN**  
 Bridge No CUY-42-1971  
 INNERBELT FREEWAY UNDER SUPERIOR AVE  
 Sta. 4+72.005  
 Cuyahoga County

Scale 1"=20'

TOPOGRAPHY	DESIGN	PROPOSED WORK
SURVEY DR. BY	DESIGN DR. BY	CH'KD. REVISED DATE
Ray	Ray	J.N.B. P.E.S.



CUYAHOGA COUNTY  
 CUY-42E-1881  
 CUY-322-(1.08-1.39)



ESTIMATED QUANTITIES		DESCRIPTION	PIERS	ABUTS	SUPERSTR.	WING WALLS	GENERAL
ITEM	TOTAL UNIT						
E-2	809 cu yds	Unclassified Excavation	350	347		11/2	
S-1	698 cu yds	Class "C" concrete, superstructure			698		
S-1	314 cu yds	Class "C" concrete, pier cap and columns	314				
S-1	110 cu yds	Class "E" concrete, pier footings	110				
S-1	249 cu yds	Class "E" concrete, abutments		249			
S-1	42 cu yds	Class "E" concrete, wing walls & wall footings				42	
S-3	1880 sq yds	Type "C" waterproofing			1880		
S-4	304,854 lbs	Reinforcing steel	81802	204,998	200,854	2450	
S-7	674,000 lbs	Structural steel			674,000		
S-8	674,000 lbs	Field painting of structural steel			674,000		
S-9	83 sq. ft.	1/2" gray sponge rubber preformed expansion joint filler	74	15			
S-9	74 sq. ft.	1" gray sponge rubber preformed expansion joint filler	74				
S-14	58354 lin. ft.	Railing (aluminum railing supports & concrete parapet)			45126	13188	
S-15	lump	Temporary run-around street (except drainage)					lump
S-16	lump	First test pile					lump
S-17	lump	First pile test load					lump
S-17	1	Subsequent pile test load					1
S-18	15560 lin. ft.	12" cast-in-place reinforced concrete piles	11400	4160			
S-25	lump	Electric lighting system, as per plan					lump
S-25	494 lin. ft.	2" dia. electric conduit (fiber)	45	4	445		
S-29	451 lin. ft.	Subdrainage for wearing surface course			451		
S-29	180 lin. ft.	8" Bituminous coated corrugated metal pipe			180		
S-29	128 lin. ft.	6" W.I. or galvanized steel pipe, including specials	104	24			
I-10	844 sq. yd.	Type "A" riprap, concrete slab					844
T-35	131 cu yds	Asphaltic concrete surface course, type "C" (60-70)			131		

**GENERAL NOTES**

REFERENCE shall be made to Supplemental Specification S-114, revised 8-1-57, Standard drawing RB-1-55 dated 3-1-55 and Standard drawing I-12, dated 7-1-54.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54 and 2-1-55.

TEMPORARY RUN-AROUND STREET shall be provided. Width face to face of curbs, 50 ft. Width out to out of shoulders, 68 ft. Sidewalk, 5 ft. wide, on south side. Pavement shall be 9" 7-70 with Type 2-A concrete curbs (Std. Dwg. I-12). Sidewalk shall be 4" thick and shall be according to Item I-13 except concrete may be same as pavement concrete. See sheet 36 for additional details.

PILES shall be driven to a minimum bearing capacity of 20 tons for the abutments and 40 tons for the piers. Batter pier piles as shown on sheet no. 120.

PILE TEST LOADS: A "First Pile Test Load" and "Subsequent Pile Test Loads" shall be applied if and where needed as directed by the Engineer.

WELDED STEEL: The steel for the 33WF220 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-74(a) of the Construction and Material Specifications) or to A-373.

WELDING of structural steel shall be class "A" except as otherwise shown. Class "B" welds are indicated thus: B

SURFACE FINISH OF CONCRETE: Exposed surfaces of piers shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

UTILITY LINES: All labor and expense involved in relocating the affected utility lines shall be borne by the respective owners of the lines. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

CONCRETE SLOPE PAVING: The sloped surface of the earth embankment under each end span, in front of the abutment shall be paved from the face of the abutment down to the toe of the slope (including the earth bench), and two feet outside the outer edges of the superstructure.

The paving shall consist of Item I-10, Type "A" riprap, 6" concrete slab with grooves at approximately 5 to 6 foot centers, running parallel to the face of the abutment in one direction and normal thereto in the other. The grooves shall be placed so that the outer portions will be trapezoids rather than triangles. The grooves shall be 1 1/2" deep, 3/8" wide at the top and 1/4" wide at the bottom, and neatly filled with crack sealer according to Sec. M-10.26. At the lower edge the slope paving shall be thickened to 18" in a distance of 3 feet to provide resistance to sliding.

Payment for excavation, concrete, reinforcing steel, and crack sealer shall be made at the contract unit price per square yard bid for Item I-10 Riprap, Type "A".

Revised 1-20-58 CPD

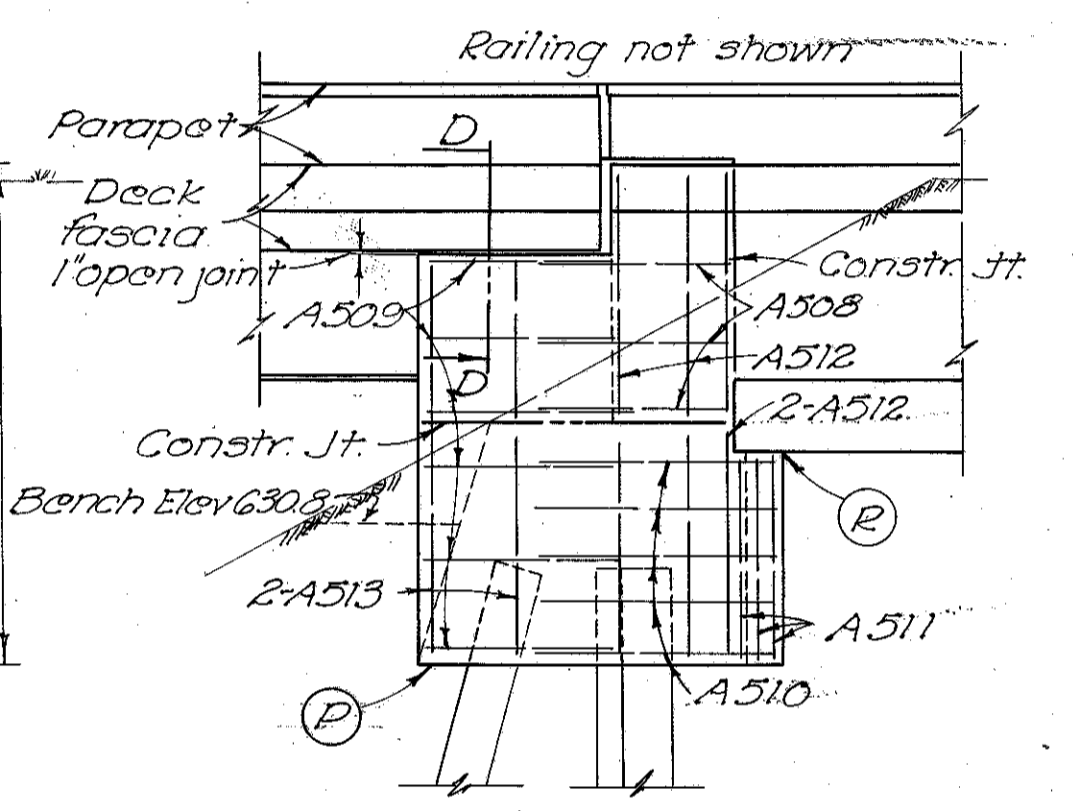
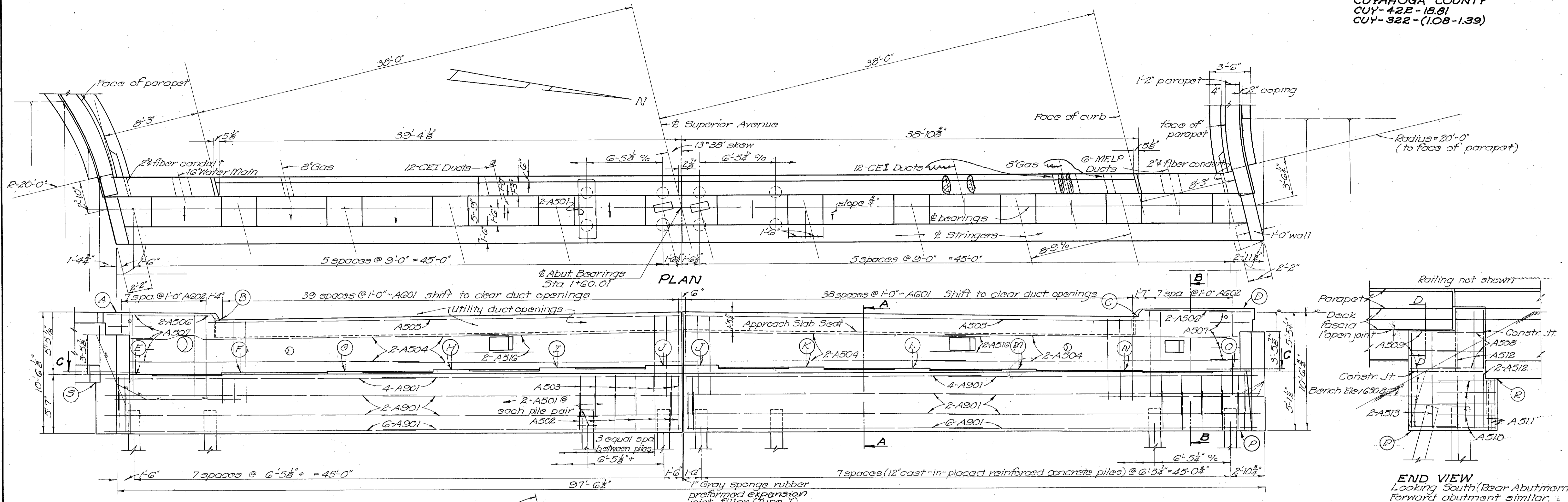
STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

**GENERAL PLAN AND ELEVATION  
 NOTES AND ESTIMATED QUANTITIES  
 BRIDGE No. CUY-42-1971  
 INNERBELT FREEWAY  
 -under- SUPERIOR AVENUE**

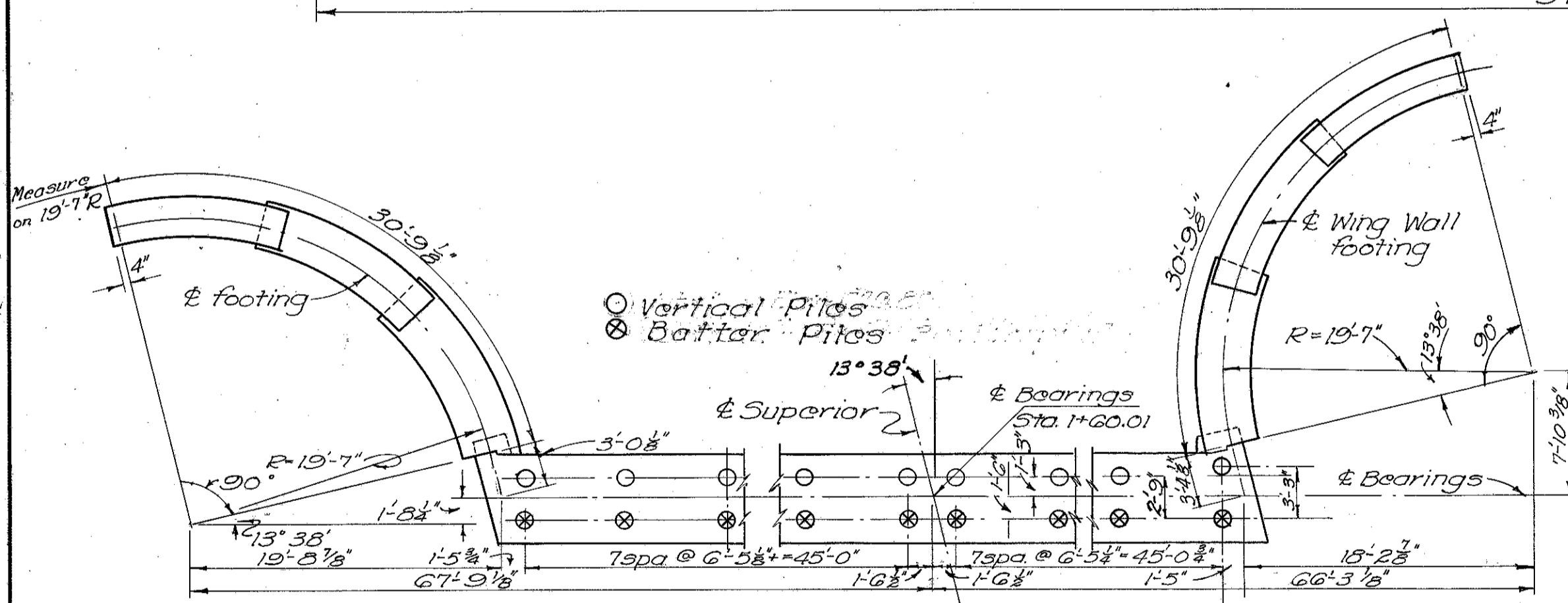
Cuyahoga County Sta. 47+72.005

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MPB	MPB	R.Z.M.	NORRIS	BFG	8-16-57	

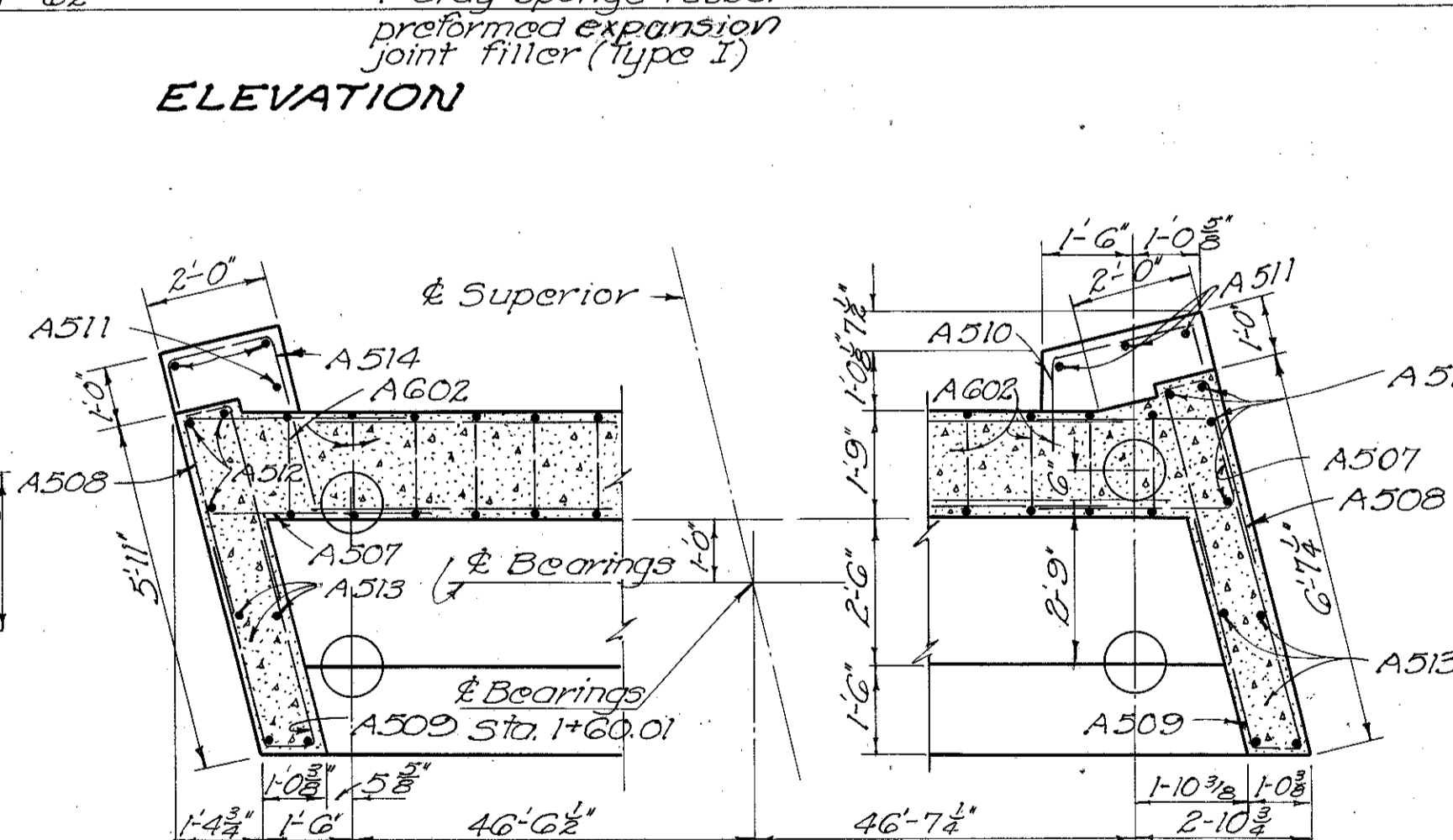
CUYAHOGA COUNTY  
 CUY-42E-18.81  
 CUY-322-(1.08-1.39)



END VIEW  
 Looking South (Rear Abutment)  
 Forward abutment similar.

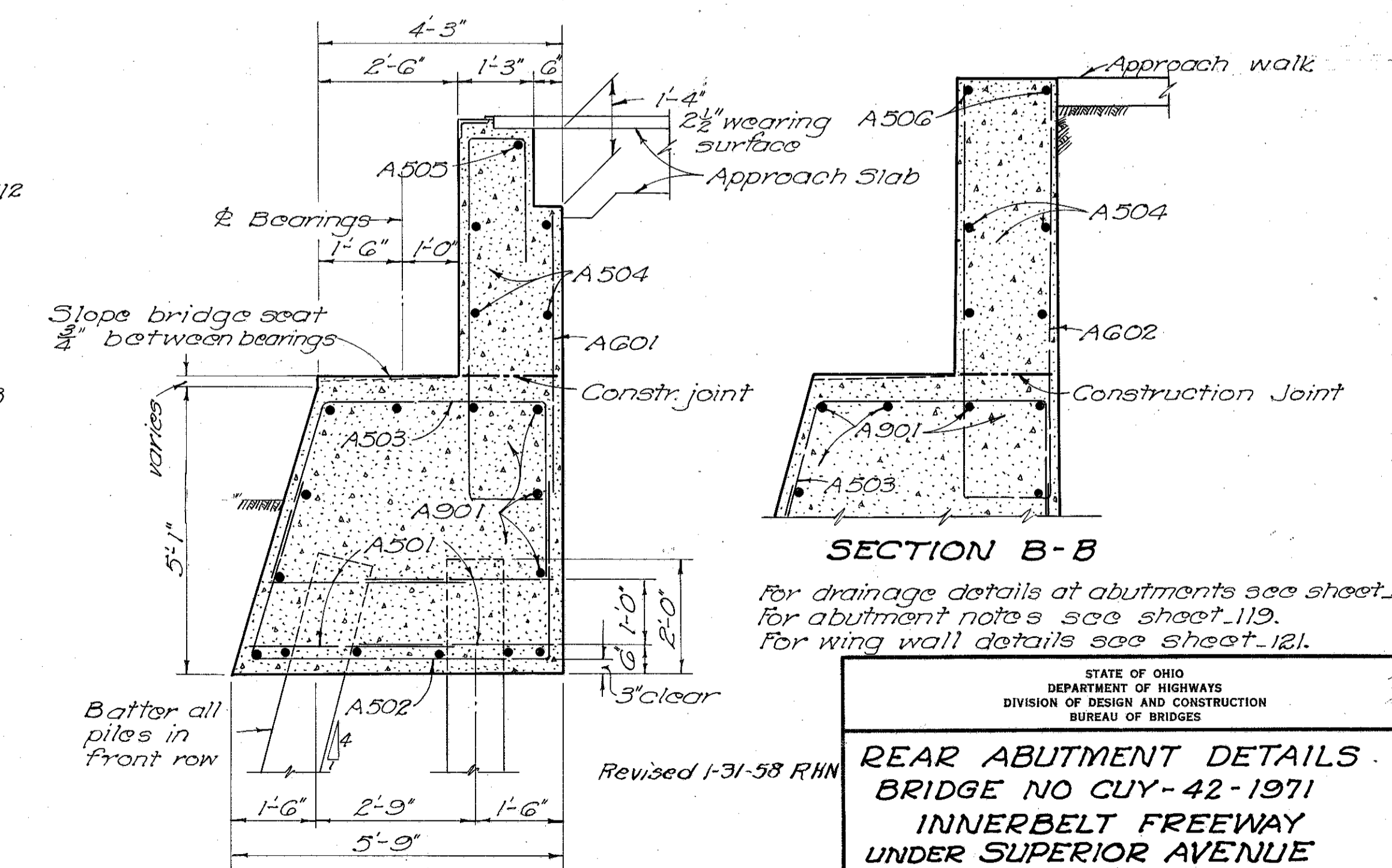


PILING PLAN  
 Rear Abutment



SECTION C-C

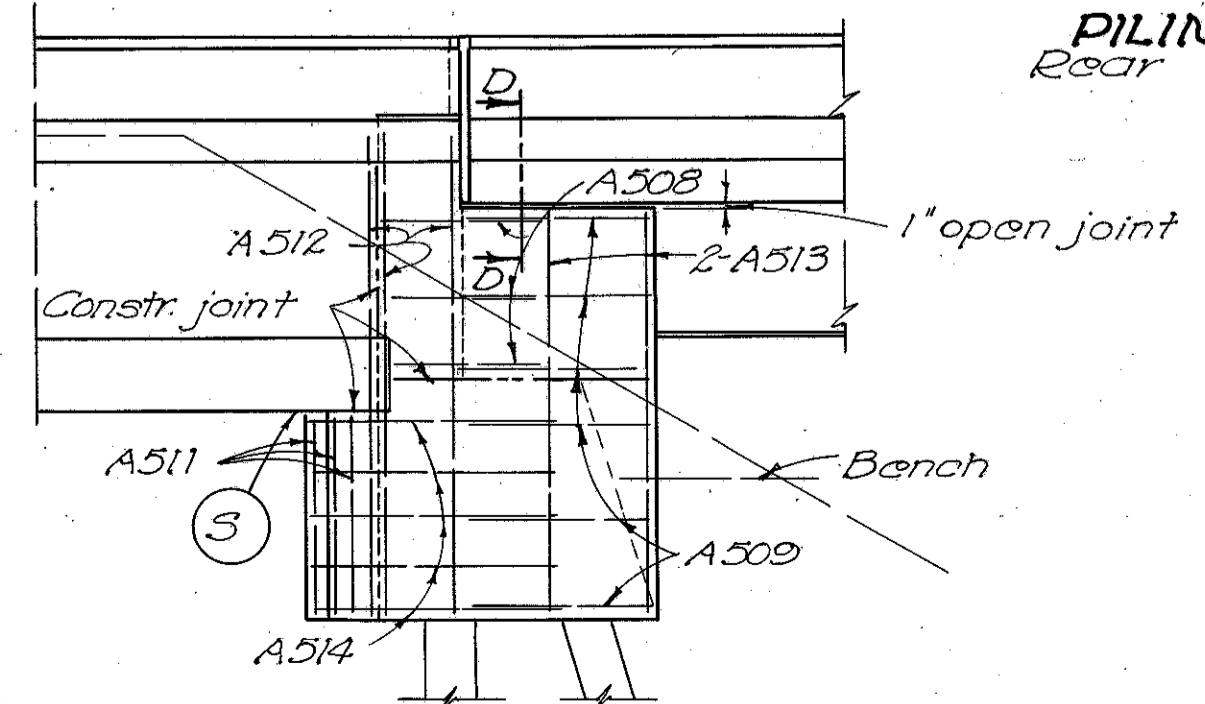
SECTION D-D



SECTION A-A

SECTION B-B

For drainage details at abutments see sheet 119.  
 For abutment notes see sheet 119.  
 For wing wall details see sheet 121.



END VIEW  
 Looking North (Rear Abutment)  
 (Forward abutment similar)

ELEVATION	A	B*	C*	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	
Rear Abutment	638.31	637.44	637.48	638.31	632.88	633.02	633.12	633.25	633.40	633.44	633.59	633.45	633.32	633.19	633.06	632.93	627.80	632.37	632.31
Forward Abutment	638.41	637.54	637.59	638.47	632.96	633.11	633.25	633.40	633.44	633.68	633.55	633.42	633.29	633.16	633.03	627.80	632.47	632.41	

\*Elevations given on top front edge of 6x4 1/2 end finish angle.

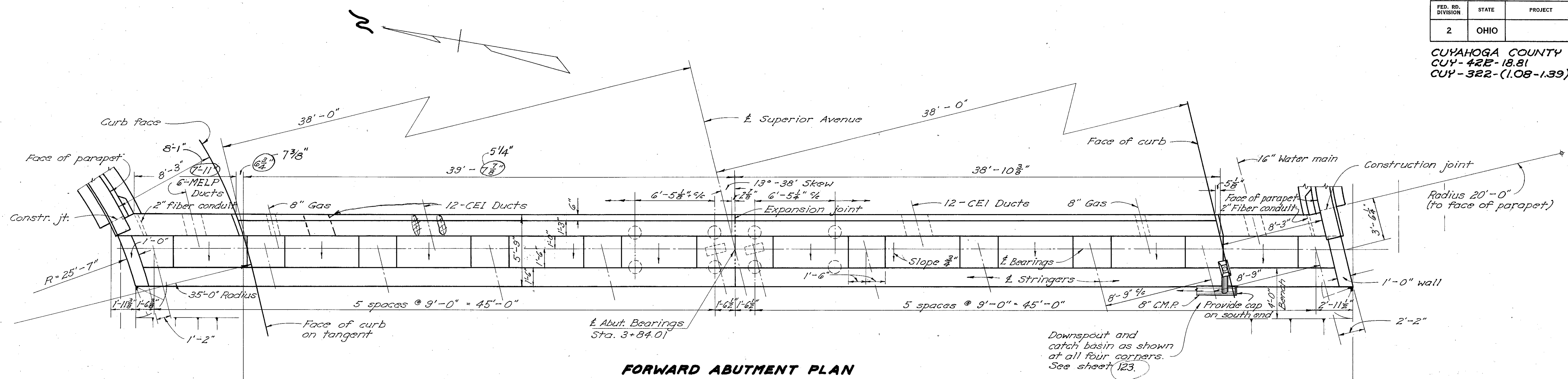
STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

**REAR ABUTMENT DETAILS**  
 BRIDGE NO CUY-42-1971  
 INNERBELT FREEWAY  
 UNDER SUPERIOR AVENUE

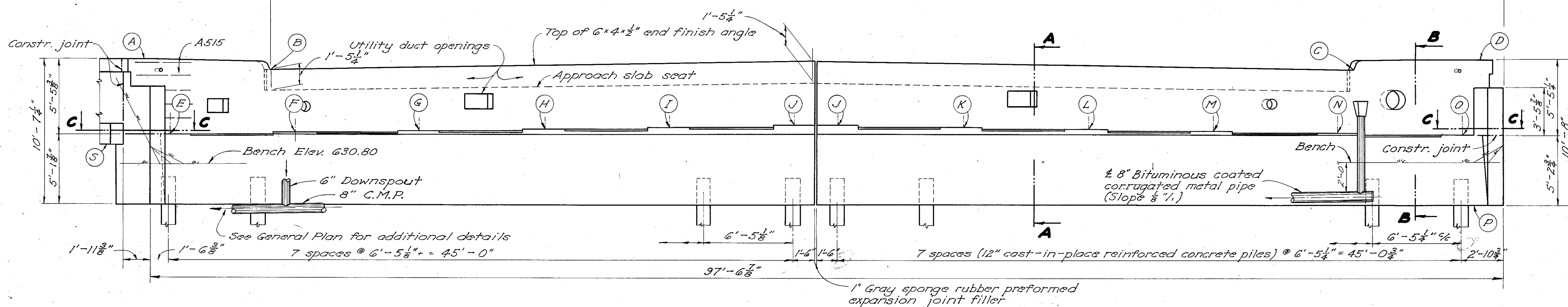
CUYAHOGA COUNTY STA. 47+72.005

DESIGNED: MPB  
 DRAWN: MPB  
 TRACED: RHD  
 CHECKED: NORRIS  
 REVIEWED: BFG  
 DATE: 8-16-57

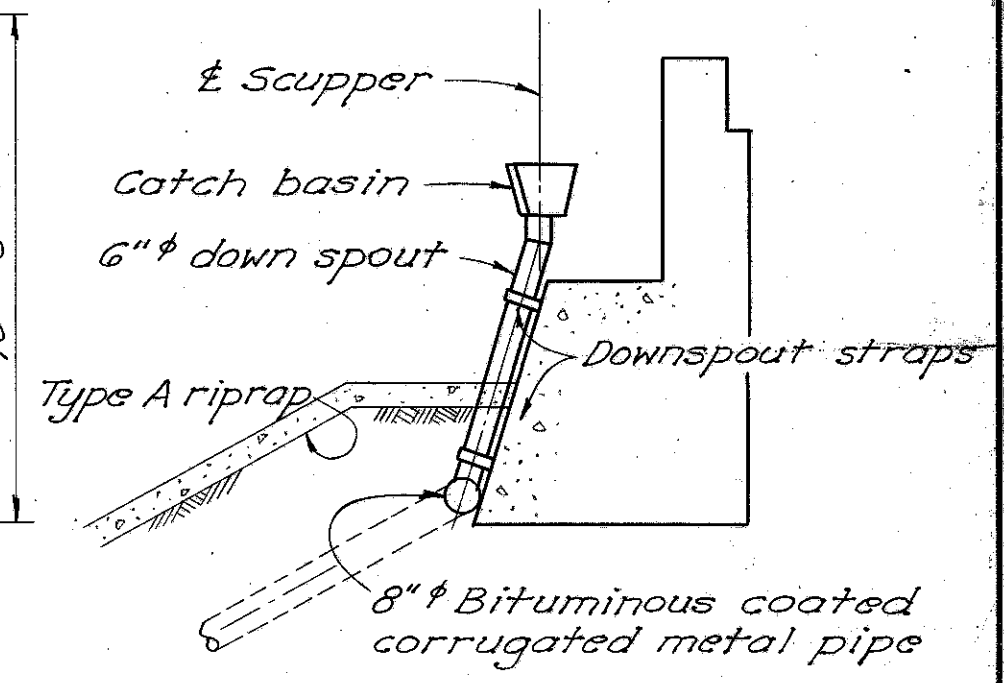
CUYAHOGA COUNTY  
 CUY-42E-18.81  
 CUY-322-(1.08-1.39)



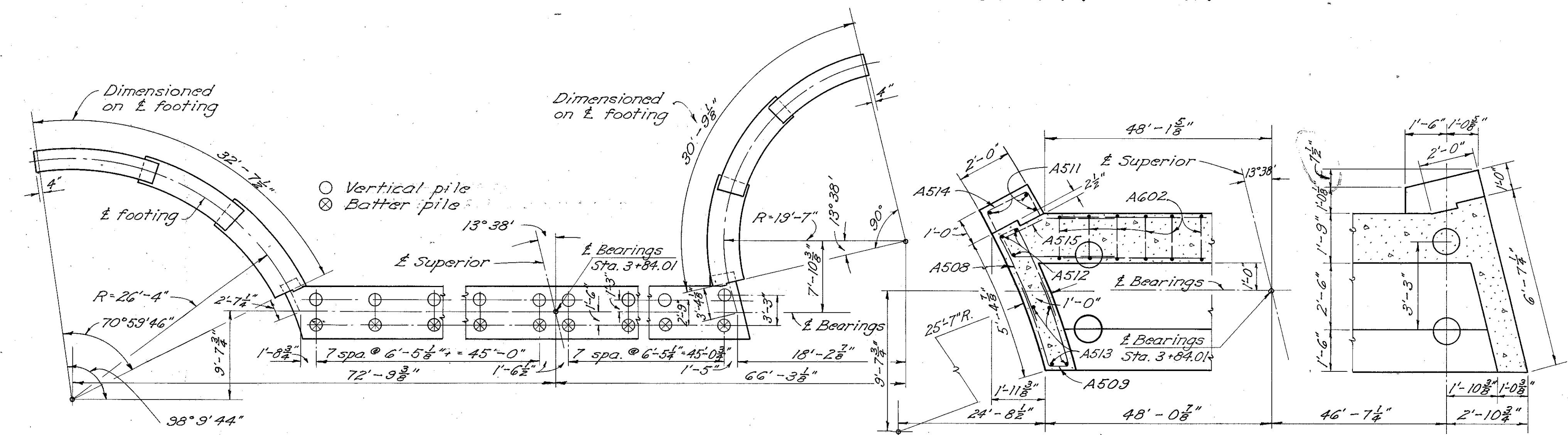
**FORWARD ABUTMENT PLAN**



**ABUTMENT ELEVATION**



**DOWNSPOUT DETAIL**  
 For additional details see sheet 114.



**PILING PLAN**  
 Forward Abutment

**SECTION C-C**  
 Forward Abutment

**NOTES:**  
 BACKWALL CONCRETE shall not be placed until after all utility ducts carried on superstructure are installed. The duct owners will provide suitable protective expansive material around ducts thru backwall. This material may be sponge rubber, cork or any commercial joint filler judged by the Engineer to be at least the equivalent of 1" of preformed expansion joint filler described in Sec. 5-9.02.

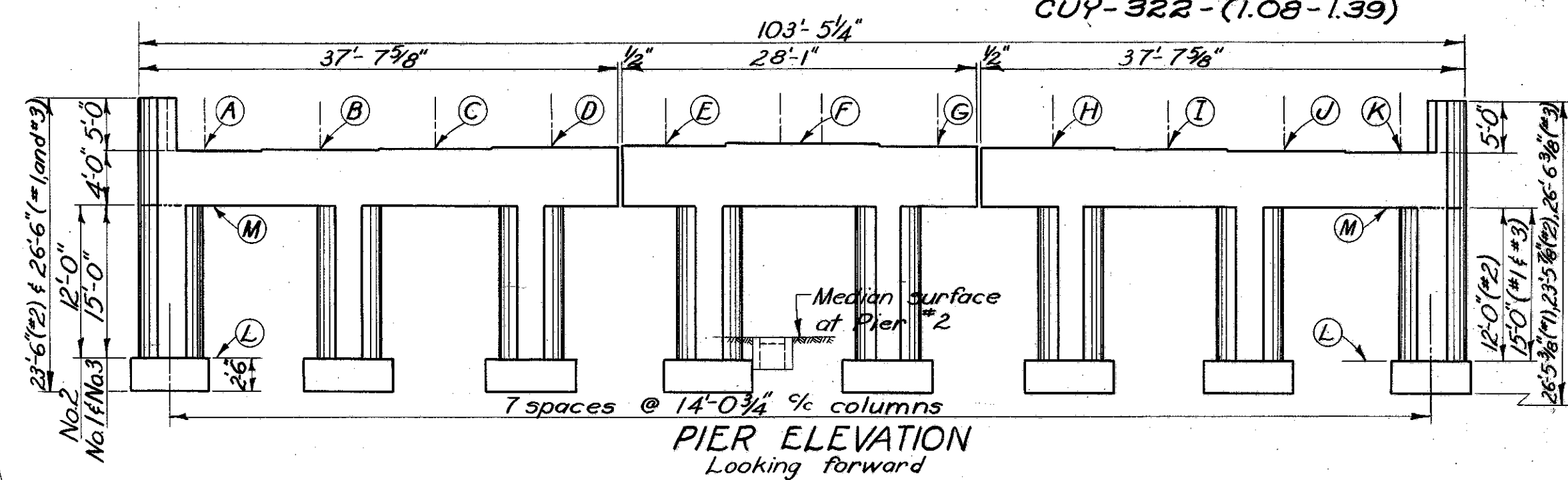
REFERENCE shall be made to rear abutment details for placement of reinforcing steel, abutment cross sections and abutment elevations.

WING WALL details are shown on sheet 121.

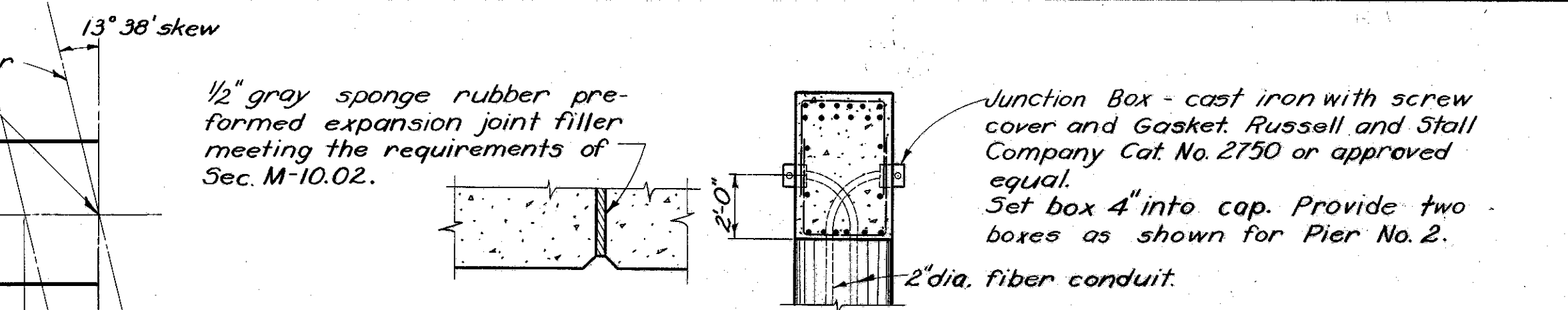
Revised 1-31-58 RHN  
 Dimensions Revised 6-13-58 MPB

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
<b>FORWARD ABUTMENT DETAILS</b>					
Bridge No. CUY-42-1971 Innerbelt Freeway Under Superior Avenue					
Cuyahoga County			Sta. 47+72.005		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
MPB	MPB	pro <sup>50</sup>	MPB	MPB	8-16-57

CUYAHOGA COUNTY  
 CUY-42E-18.81  
 CUY-322-(1.08-1.39)



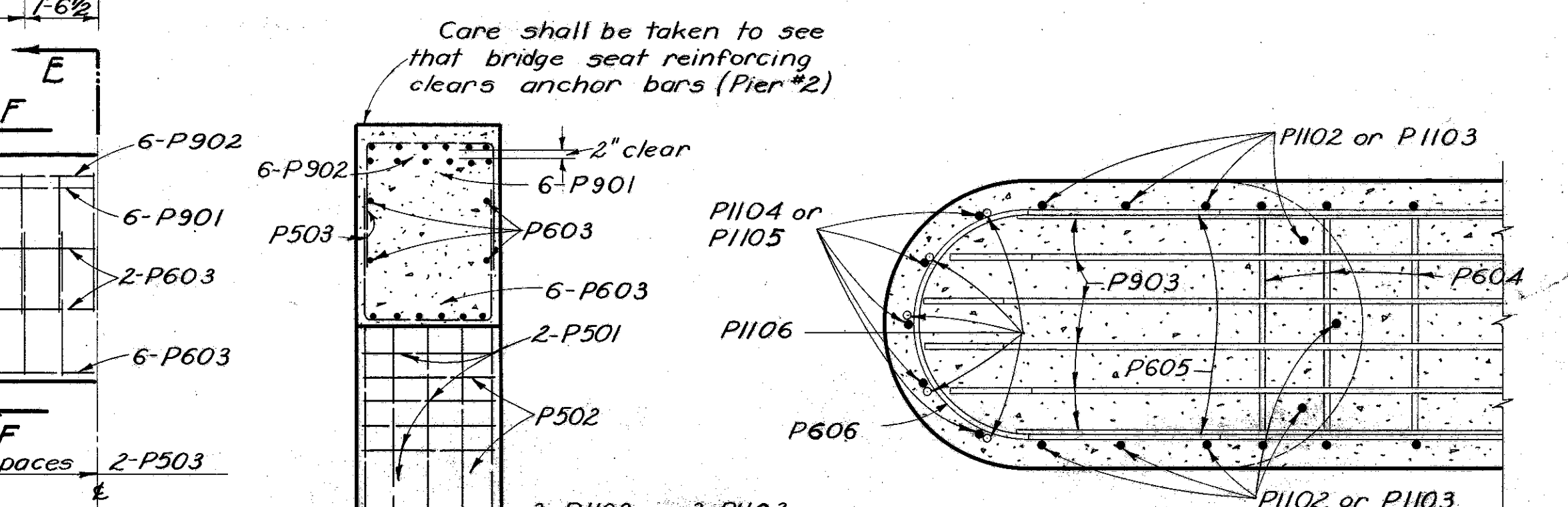
ELEVATIONS													
LOCATION	A	B	C	D	E	F	G	H	I	J	K	L	M
PIER NO.1	632.49	632.62	632.76	632.89	633.02	633.15	633.01	632.86	632.72	632.58	632.44	613.49	628.49
PIER NO.2	632.53	632.67	632.81	632.94	633.08	633.21	633.07	632.94	632.80	632.66	632.52	616.53	628.53
PIER NO.3	632.52	632.66	632.80	632.94	633.08	633.22	633.09	632.96	632.82	632.69	632.55	613.52	628.52



1/2" gray sponge rubber pre-formed expansion joint filler meeting the requirements of Sec. M-10.02.

Junction Box - cast iron with screw cover and Gasket. Russell and Stall Company Cat No. 2750 or approved equal. Set box 4" into cap. Provide two boxes as shown for Pier No. 2.

2" dia. fiber conduit.



Symmetrical about & except for beam bearing elevations, junction and pull boxes, and bridge drainage details.

For details of electrical grounds see Sheet No. 99A.

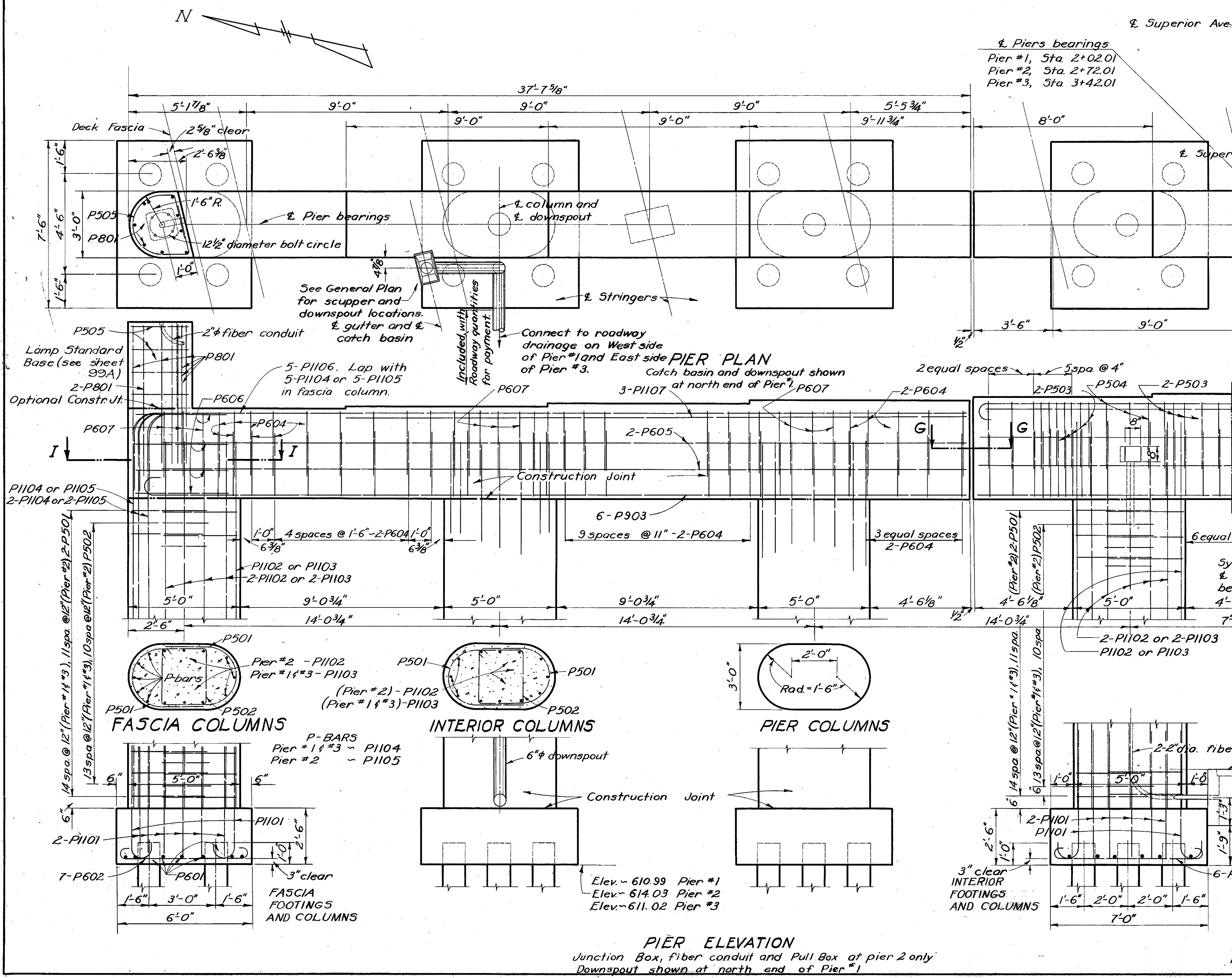
CATCH BASIN AND DOWNSPOUT details, not shown, shall be similar to details shown on sheet 114 of Bridge No. CUY-42-1952.

LAMP STANDARD and pull box details on sheet 99A.  
 REINFORCING STEEL shall be 2" clear unless otherwise noted.

STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

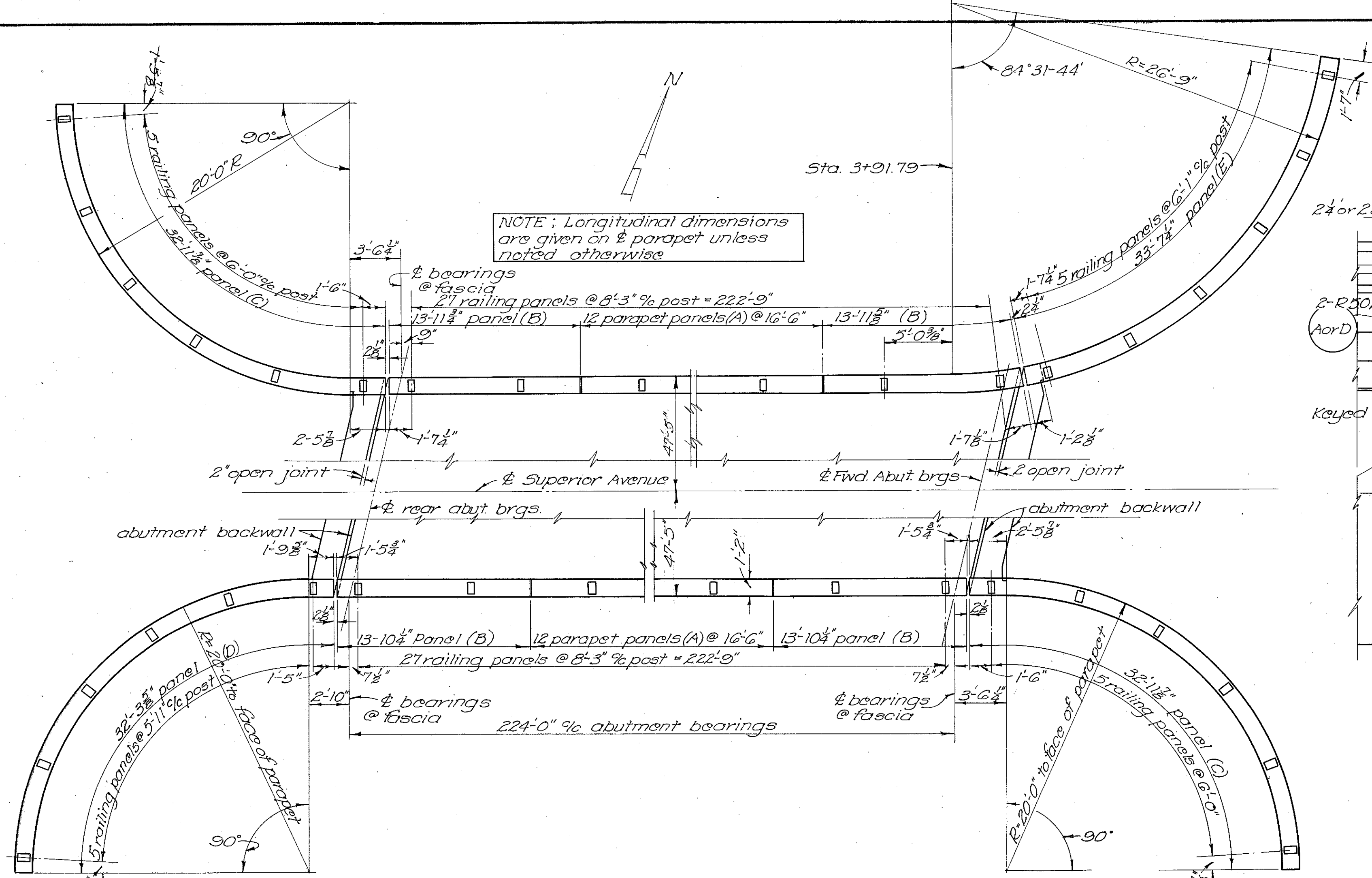
**PIER DETAILS**  
 BRIDGE NO CUY-42-1971  
 INNERBELT FREEWAY  
 under SUPERIOR AVE.  
 Cuyahoga County Sta. 47+72.005

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MPB	MPB	LDC	ORRIS	BFG	9.8.57	8-16-57

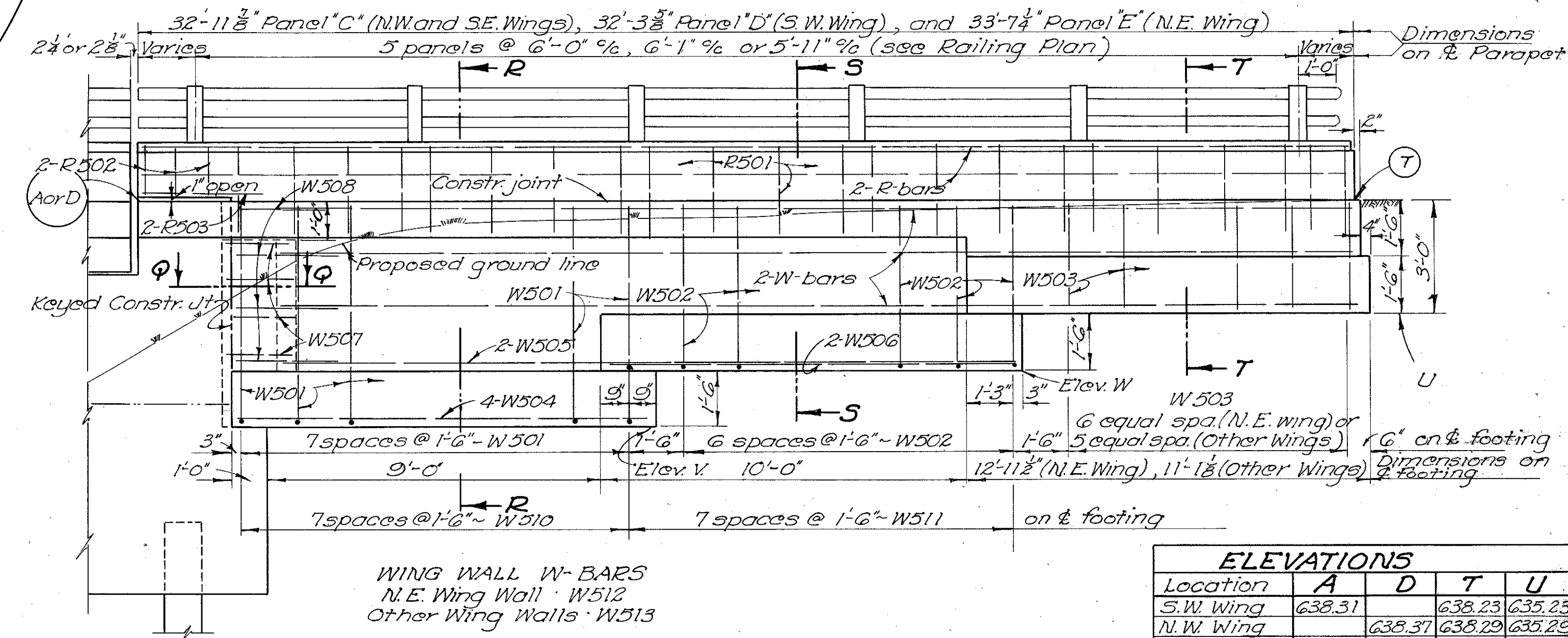


**PIER ELEVATION**  
 Junction Box, fiber conduit and Pull Box at pier 2 only  
 Downspout shown at north end of Pier #1

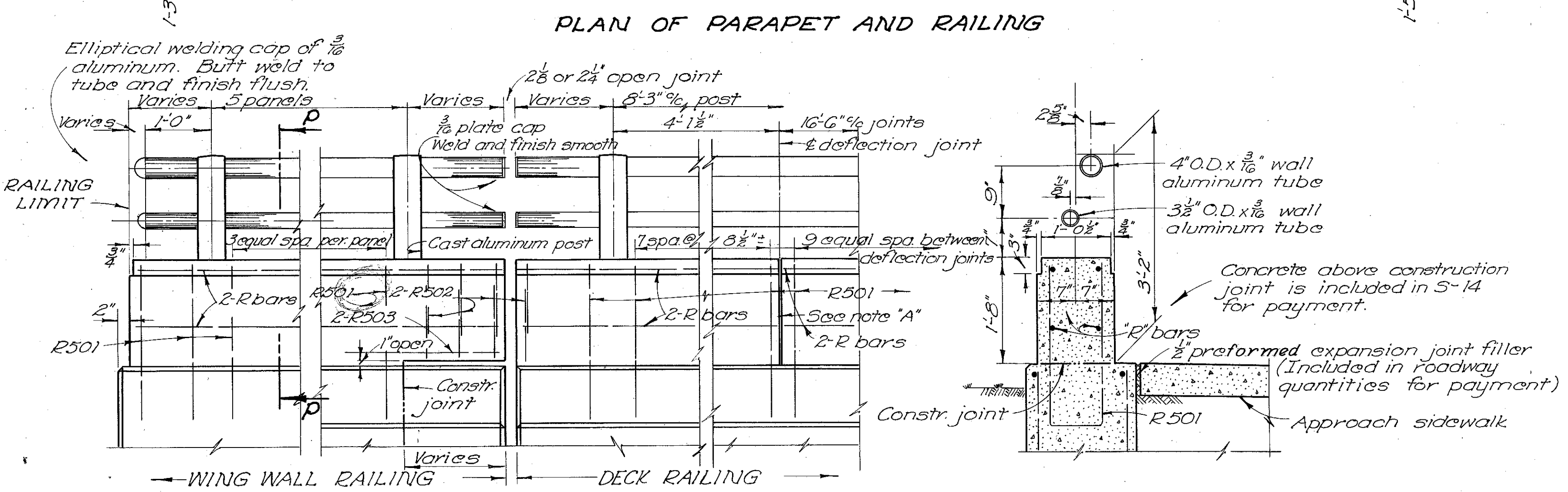
CUYAHOGA COUNTY  
 CUY-42R-1881  
 CUY-322-(1.08-1.39)



NOTE: Longitudinal dimensions are given on the parapet unless noted otherwise



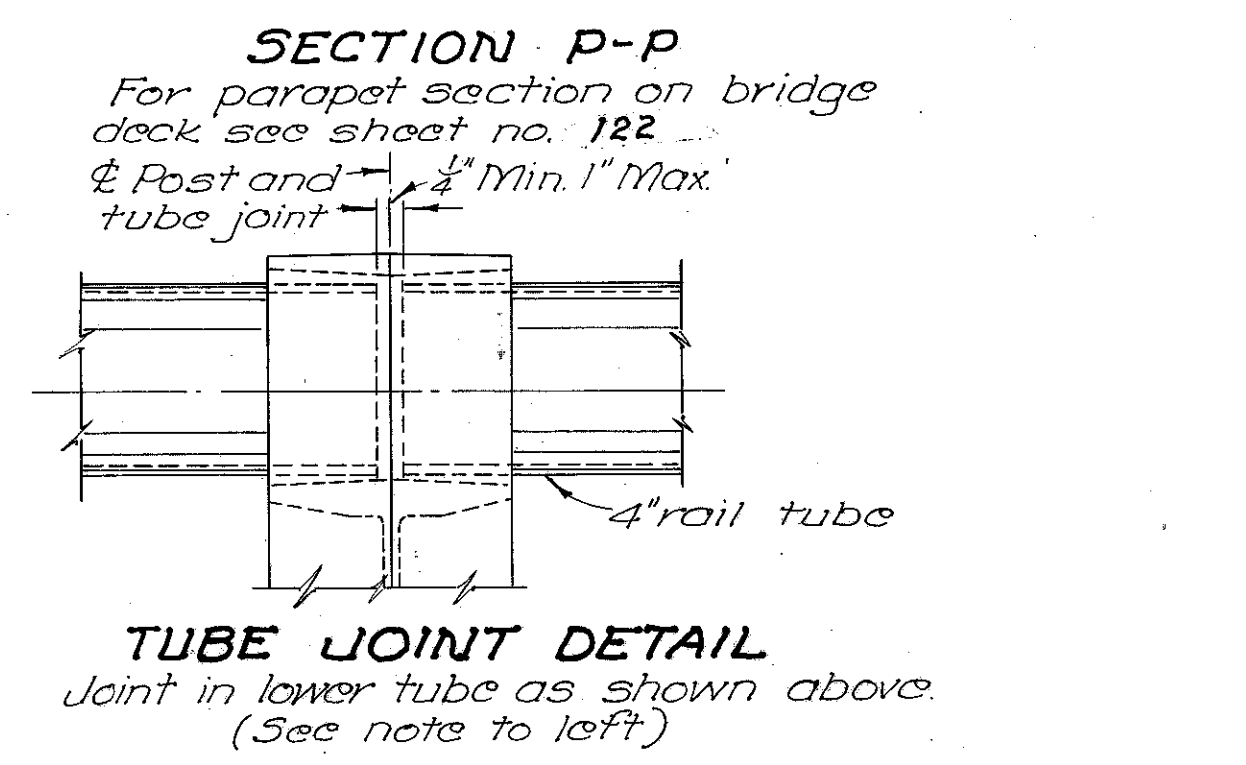
ELEVATIONS				
Location	A	D	T	U
S.W. Wing	638.31		638.23	635.23
N.W. Wing		638.31	638.29	635.29
S.E. Wing		638.47	638.39	635.39
N.E. Wing	638.41		638.32	635.32
			V	W
			632.28	633.75
			632.34	633.81
			632.44	633.91
			632.30	633.85



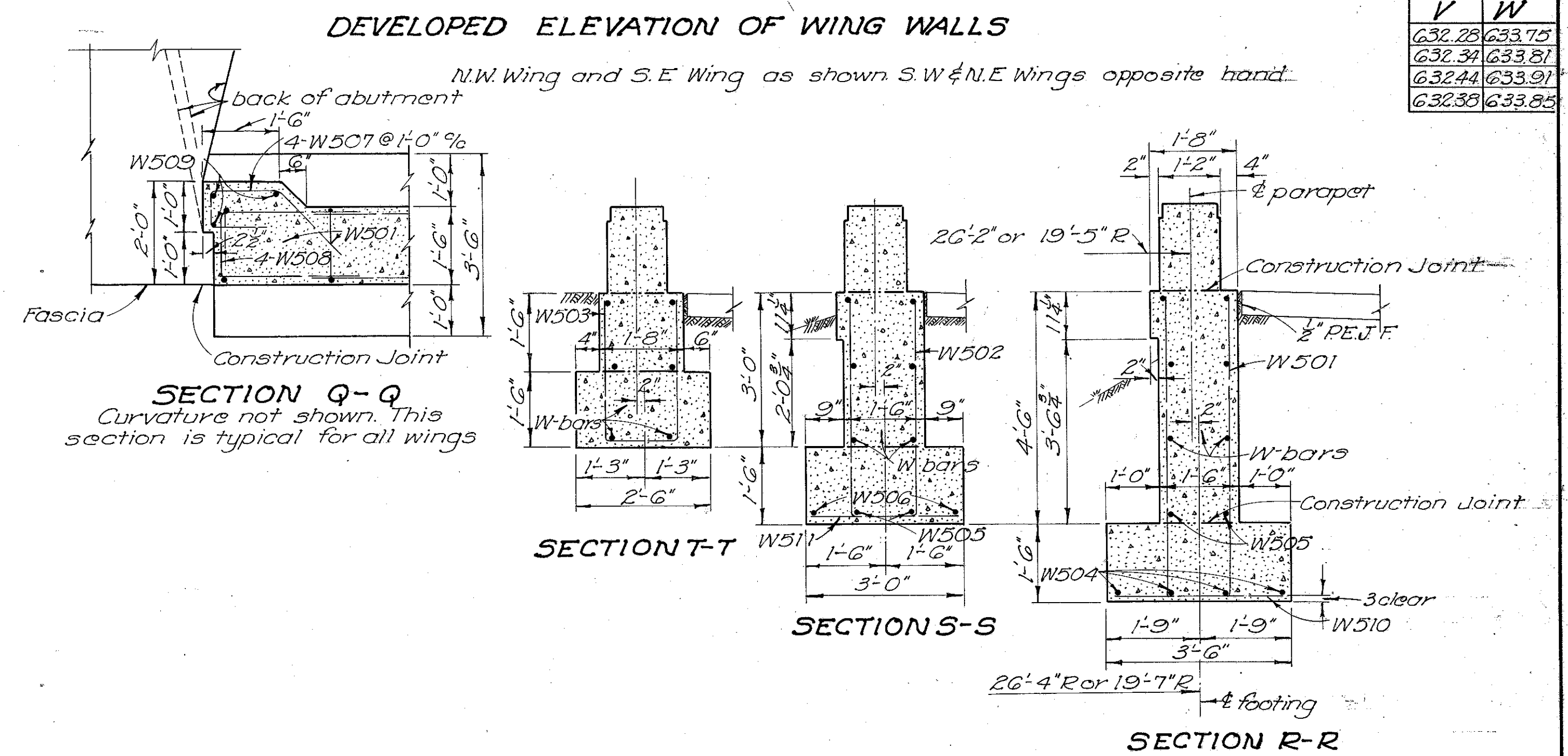
NOTE "A"  
 DEFLECTION JOINT - Form with 1/4" gray sponge rubber preformed expansion joint filler meeting the requirements of Sec. M-10.02. (include with S-14 for payment).

RAILING POST shall be as shown on Common Detail Sheet 99A.  
 RAILING TUBES shall be continuous thru first post and for two or three panel lengths. Joints in upper and lower rails shall be staggered. See detail on this sheet for tube joint.

PARAPET PANEL R-BARS					
Panel (see plan)	A	B	C	D	E
R-bar	R504	R505	R506	R507	R508



TUBE JOINT DETAIL  
 Joint in lower tube as shown above. (See note to left)



REFERENCE shall be made to ABUTMENT DETAILS, sheet 118 and 119, and to SUPERSTRUCTURE DETAILS, sheet 122 for additional parapet and wing wall details.

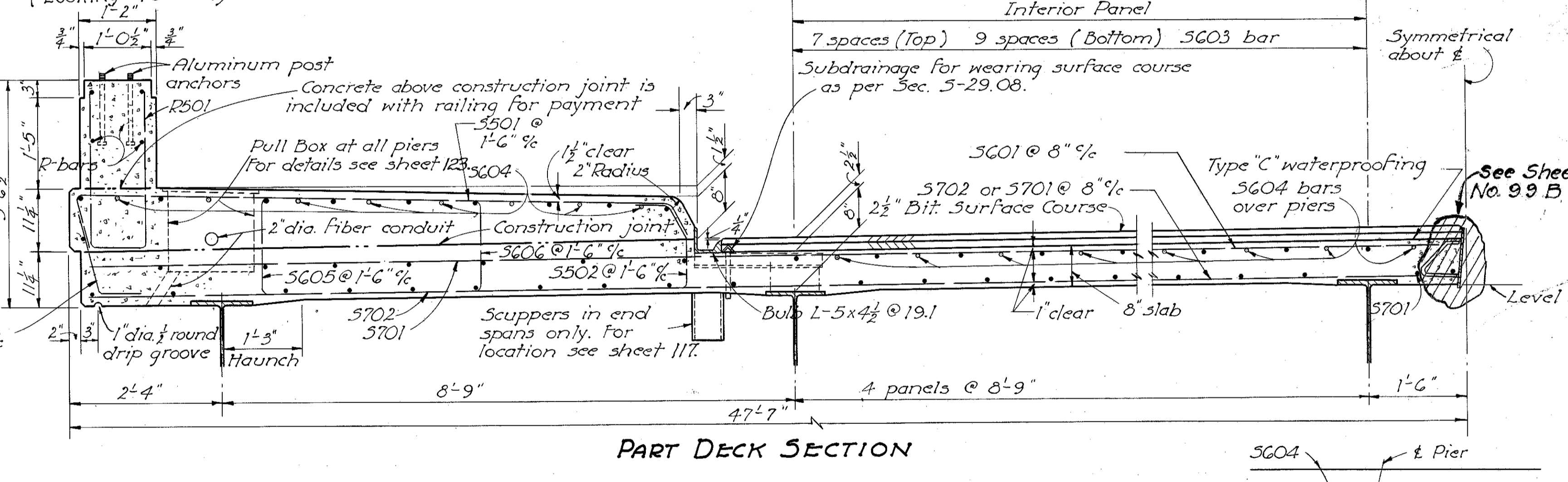
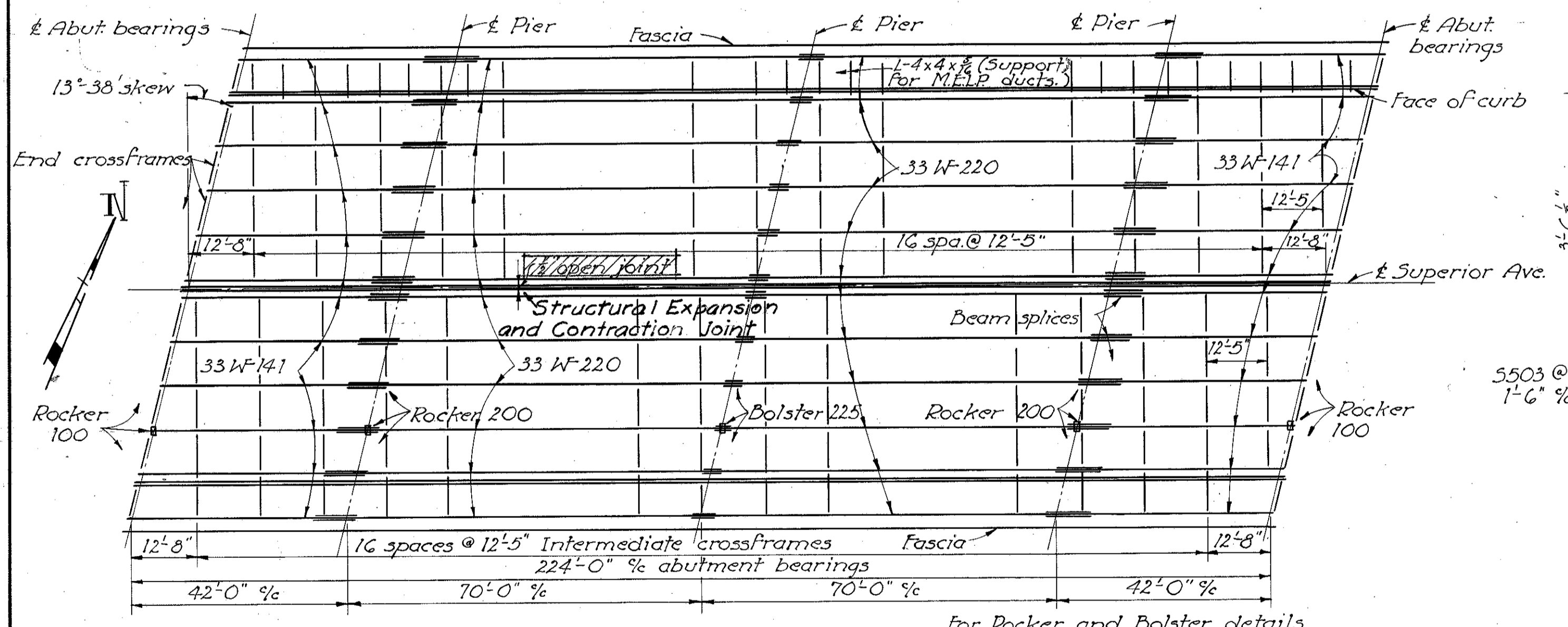
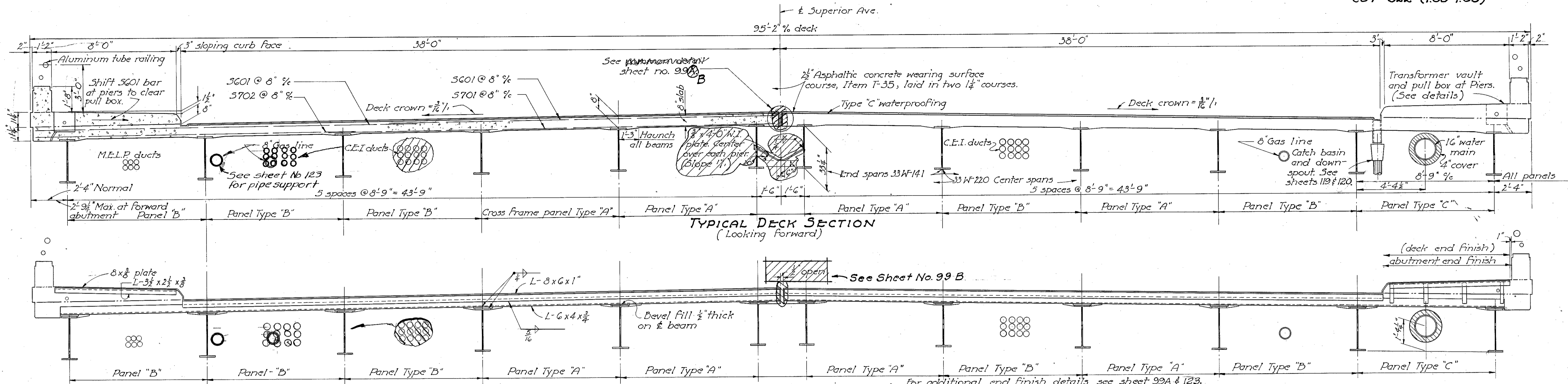
STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

**RAILING AND WING WALL DETAILS**  
**BRIDGE No. CUY-42-1971**

**INNERBELT FREEWAY**  
**UNDER SUPERIOR AVENUE**  
**CUYAHOGA COUNTY STA. 47+72.005**

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MPB	MPB	RHD	NORRIS N.J.B.	BFG	9-16-57	

CUYAHOGA COUNTY  
 CUY-42E-18,81  
 CUY-322-(1.08-1.39)



**SUPERSTRUCTURE NOTES**  
**LONGITUDINAL REINFORCING** shown in the PART DECK SECTION are 5603 except where shown otherwise. Lap 5603 bars 1'-11" minimum.  
**TRANSVERSE REINFORCING** (except in curbs) shall be placed parallel to piers and abutments. The 8" spacing is measured parallel to roadway.  
**DECK CONSTRUCTION PROCEDURE**: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.  
**GUTTERS** shall be accurately adjusted for alignment and grade with allowance for dead load deflection before concrete is placed. Milled joints will be permitted in the bulb angles, but individual lengths shall be made as long as practical.  
**DEFLECTIONS** for dead load other than steel are 1/16" for the end spans and 1/8" for the interior spans. Total deflections do not warrant cambering but beams shall be so fabricated that any convex flanges shall be placed up.

**GUTTERS, SCUPPERS** and gutter supports shall be similar to details shown on sheet 114.  
 Scuppers in end spans only. For location see sheet 117.



STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

**SUPERSTRUCTURE DETAILS**  
 BRIDGE No. CUY-42-1971  
 INNERBELT FREEWAY  
 - UNDER - SUPERIOR AVENUE

CUYAHOGA County STA. 47+72.005

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MPB	MPB	Grasse III	NARRIS	BRIS	8-16-57	

Revised 1-20-58 CPD  
 Revised 1-31-58 RHN

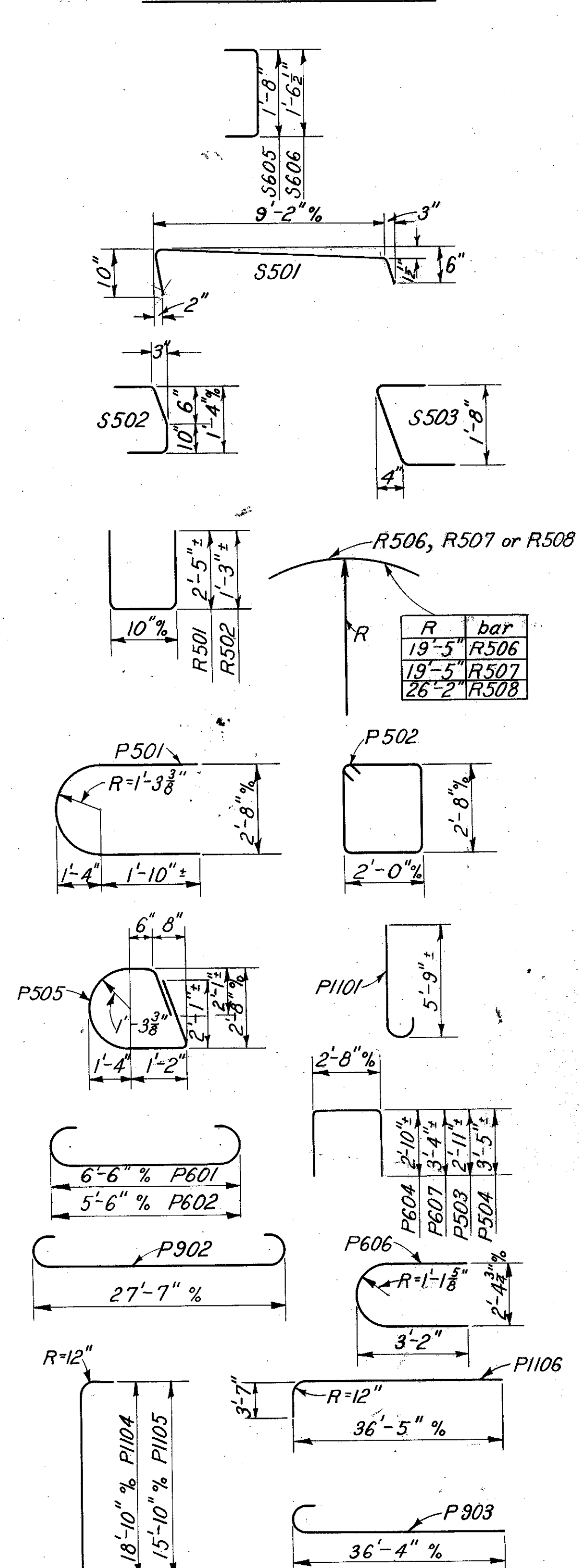


CUYAHOGA COUNTY  
 CUY-42E-18.81  
 CUY-322-(108-1.39)

### REINFORCING STEEL LIST

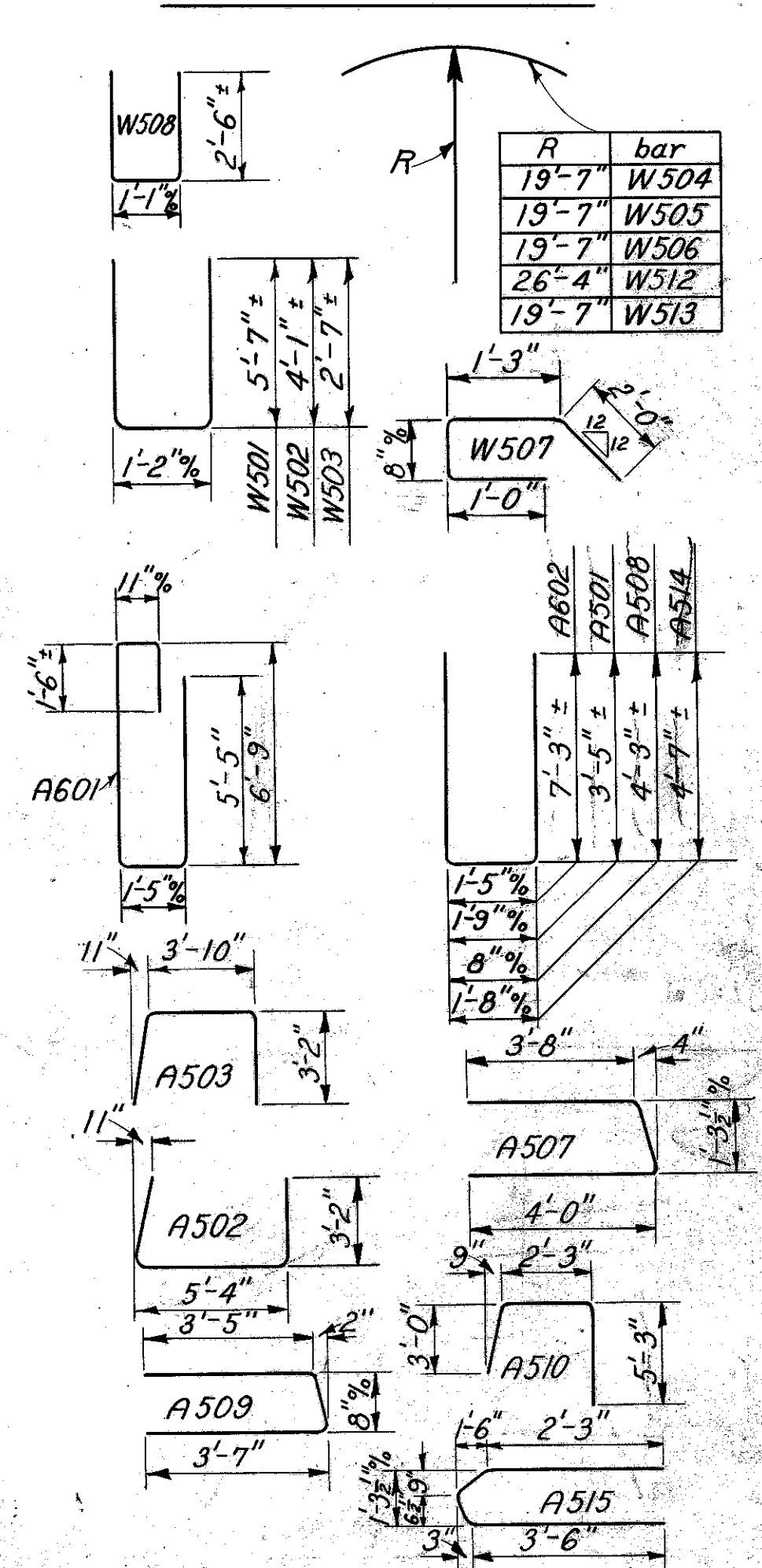
MARK	No.	LENGTH	WEIGHT	SHP.
<b>Superstructure</b>				
S701	676	28'-7"	89435	St.
S702	676	20'-7"	28441	St.
S601	1352	24'-6"	49752	St.
S603	1116	39'-3"	65792	St.
S604	216	28'-0"	9084	St.
S605	302	3'-0"	1361	Bt.
S606	302	2'-11"	1323	Bt.
S501	302	10'-1"	3176	Bt.
S502	302	2'-7"	814	Bt.
S503	302	2'-9"	866	Bt.
<b>Railing</b>				
R501	364	5'-5"		Bt.
R502	32	3'-1"		Bt.
R503	8	4'-0"		St.
R504	96	16'-2"		St.
R505	16	13'-6"		St.
R506	8	32'-7"		Bt.
R507	4	31'-10"		Bt.
R508	4	33'-2"		Bt.
<b>Piers</b>				
P1101	300	7'-4"	11689	Bt.
P1102	90	14'-6"	6933	St.
P1103	180	17'-6"	16736	St.
P1104	20	20'-0"	2125	Bt.
P1105	10	17'-0"	903	Bt.
P1106	30	38'-8"	6163	Bt.
P1107	18	28'-0"	2678	St.
P901	18	27'-0"	1652	St.
P902	18	30'-1"	1841	Bt.
P903	36	37'-7"	4600	Bt.
P801	48	7'-2"	918	St.
P601	258	7'-10"	3036	Bt.
P602	42	6'-10"	431	Bt.
P603	30	27'-9"	1250	St.
P604	360	8'-0"	4326	Bt.
P605	24	36'-0"	1298	St.
P606	24	7'-7"	273	Bt.
P607	54	9'-0"	730	Bt.
P501	672	7'-10"	5490	Bt.
P502	624	9'-10"	6400	Bt.
P503	222	8'-3"	1910	Bt.
P504	18	9'-3"	174	Bt.
P505	24	9'-10"	246	Bt.

#### BENDING DIAGRAMS

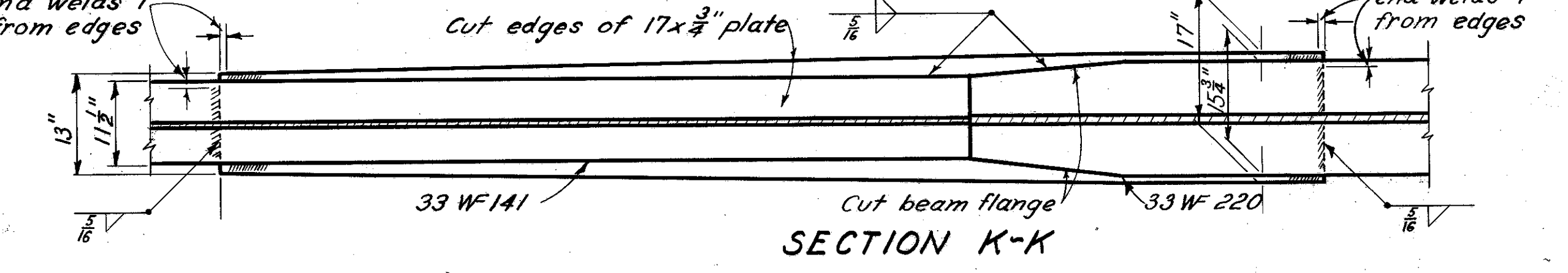
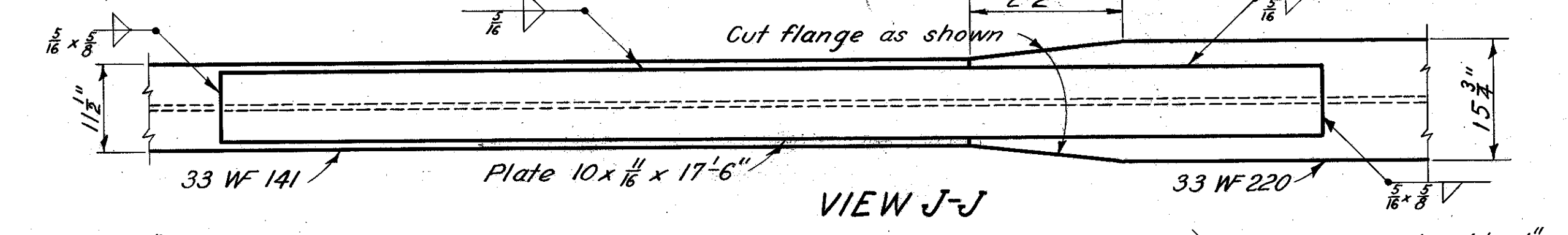
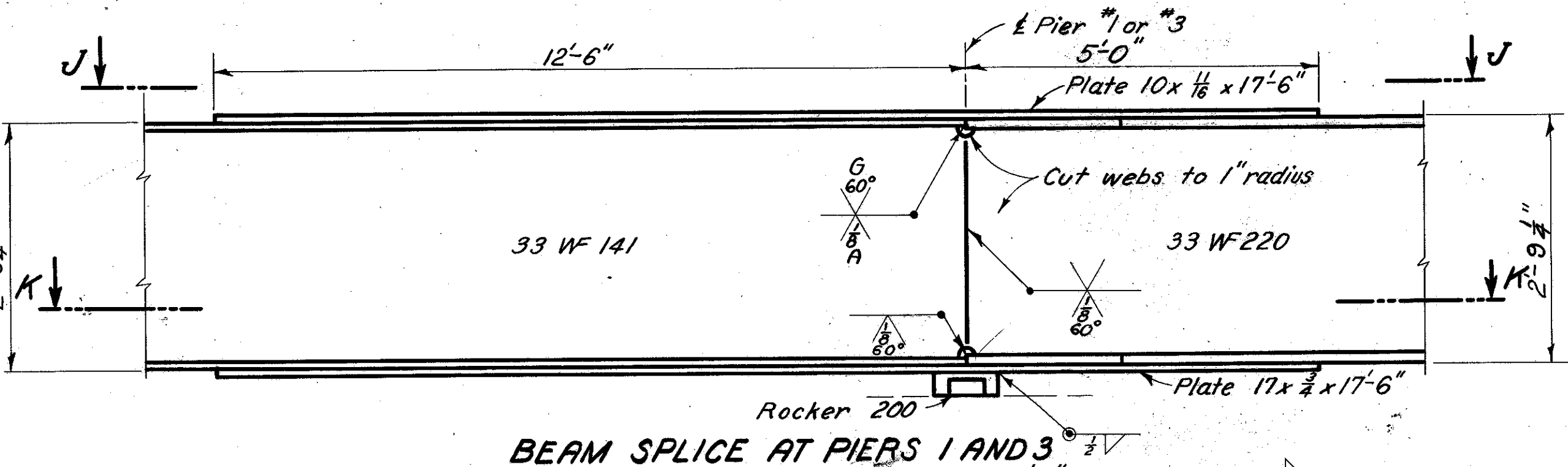
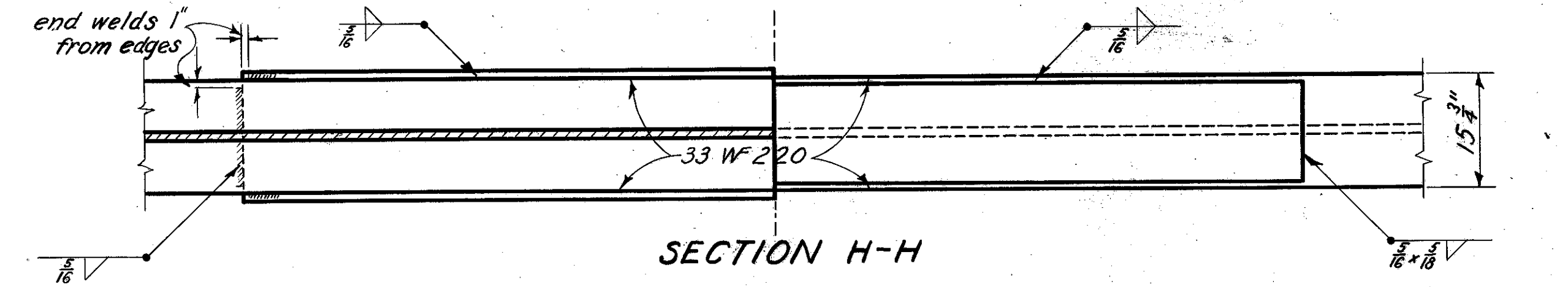
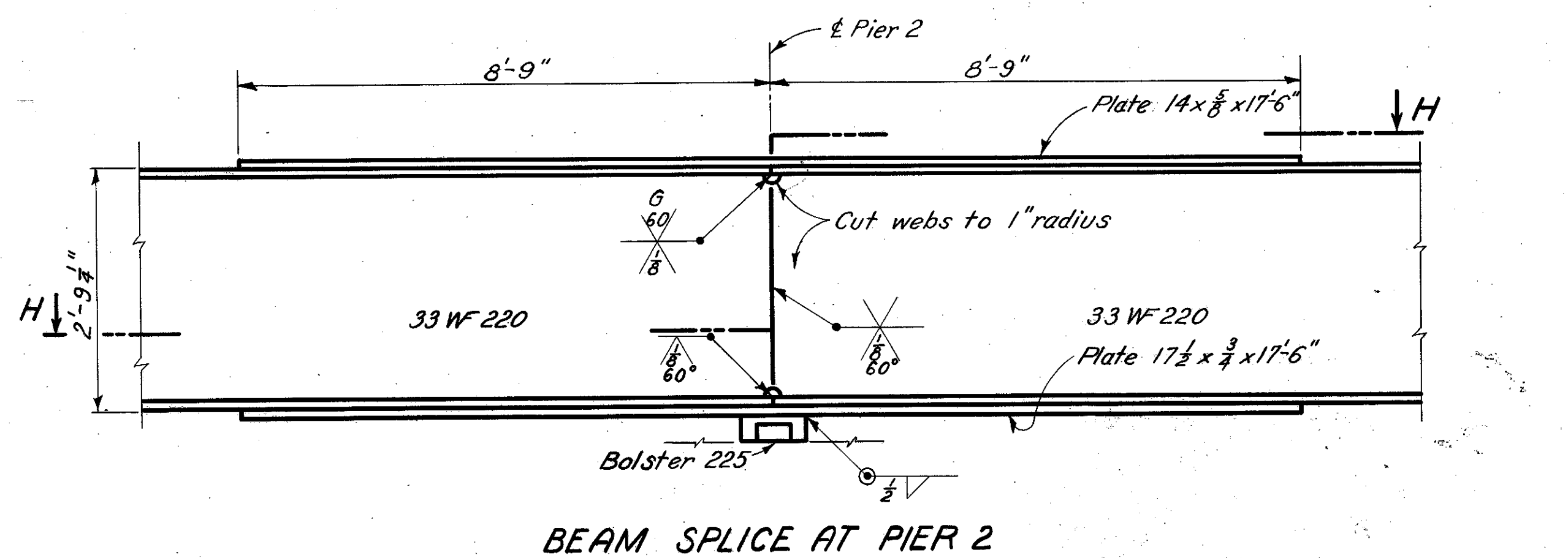


MARK	No.	LENGTH	WEIGHT	SHP.
<b>Wing Wall</b>				
W501	32	12'-1"	403	Bt.
W502	28	9'-1"	265	Bt.
W503	25	6'-1"	159	Bt.
W504	16	11'-2"	186	Bt.
W505	8	20'-3"	169	Bt.
W506	8	11'-2"	93	Bt.
W507	16	4'-8"	78	Bt.
W508	16	5'-10"	96	Bt.
W509	12	4'-6"	56	St.
W510	32	3'-2"	106	St.
W511	32	2'-8"	89	St.
W512	6	31'-4"	196	Bt.
W513	18	29'-6"	554	Bt.
<b>Abutments</b>				
A901	112	26'-0"	9901	St.
A601	158	15'-4"	3639	Bt.
A602	32	15'-7"	749	Bt.
A501	128	8'-4"	1113	Bt.
A502	128	11'-7"	1546	Bt.
A503	128	10'-1"	1346	Bt.
A504	32	24'-1"	804	St.
A505	4	40'-0"	167	St.
A506	8	7'-0"	58	St.
A507	20	8'-9"	183	Bt.
A508	12	8'-11"	112	Bt.
A509	24	7'-5"	186	Bt.
A510	10	10'-4"	108	Bt.
A511	12	4'-0"	50	St.
A512	14	10'-2"	148	St.
A513	16	8'-3"	138	St.
A514	10	10'-7"	110	Bt.
A515	5	7'-9"	40	Bt.
A516	16	6'-0"	100	St.
<b>Replacement Bars</b>				
RE1100	3	7'-6"		St.
RE900	1	6'-10"		St.
RE800	1	6'-6"		St.
RE700	4	6'-2"		St.
RE600	8	5'-11"		St.
RE500	2	5'-7"		St.

#### BENDING DIAGRAMS



BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, S701 is a No. 7 size bar and P1101 is a No. 11 size bar. REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec S-4.02 need not be furnished and replacement bars will not be required.



#### BEAM SPLICE NOTES

**MATERIAL PREPARATION:** Beam flanges and splice plates may be flame cut but a mechanical guide shall be used. Grind edge smooth after cutting.  
**NOTE "G":** Grind flush after welding.  
**NOTE "A":** Grind flange to smooth transition after welding.  
**PROCEDURE:**  
 (1) Raise end of beam 1/4" at Pier #2  
 (2) Butt weld beam flanges and web at Pier #1 using the following sequence: make one pass on each flange, then one on the web, repeat until welds are completed.  
 (3) Weld top and bottom flange splice plates at Pier #1.  
 (4) Lower end of beam at Pier #2.  
 (5) Make splices at Pier #2 and #3 in the same manner; raising the beam 1/4" at Pier #3, and 1/2" at forward Abutment.

Revised 3-13-58 MPB

STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES

**BEAM SPLICE DETAILS AND REINFORCING STEEL LIST**  
 BRIDGE NO. CUY-42-1971  
 INNERBELT FREEWAY  
 under SUPERIOR AVENUE  
 Cuyahoga County Sta 47+72.005

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MPB	MPB	P.T.M.		BFG	8-16-57	